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1917

Seeds



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J. W. Bittenbender

Knoxville, - - Iowa

W. W. Tracy, Jr.

JAN 31 1921

SEEDS

nity can be taken care of best at the home seed store. The old custom of sending away for seeds is growing less each year and for this reason the home seed store is becoming more firmly a fixture and better able each year to meet the increasing demand for fresh, reliable seeds.

Some of our friends may still cling to the idea that they gain something by sending away for their seeds. All we ask of such is a chance to show that the idea is wrong.

Our Catalogue describes all of the best standard varieties and the newer kinds that have become popular. Our supplies are from the right sources and we offer them at the right prices. We are prepared to fill all orders and solicit the trade of the Market Gardener as well as the amateur planter.

We make a specialty of seeds for the town garden and for the farm garden. Good Seeds are necessary if good crops are expected, and our success depends upon selling you that kind. Call or write, and be sure to let us figure on your order.

Fertilizers

Fertilizer Values Vary. Write for Prices.

The value of Commercial Fertilizer is well known. There are many different brands and combinations—each of which has its value for certain crops and conditions of soil. The element that is lacking in the soil is what the special fertilizer supplies. Write for our prices and for information as to kinds.

Insecticides



Bug Death. This new preparation comes highly recommended after a six years' test. It is sure death to the Potato Bug, and besides it acts as a fertilizer. There are many testimonials at hand from very large potato growers. From the reports that we have received in regard to this new insecticide we feel much confidence in

offering it with our indorsement to any of our customers who want a quick acting, sure, non-poisonous bug-killer. It can be used on all vegetables and fruit crop and will give excellent results.

1 lb. package, 15c; 3 lb. package, 40c; 5 lb. package, 60c; 12½ lb. package, \$1.25; 100 lb. keg, \$8.00.

Slug Shot (Hammonds). Excellent for destroying cabbage, turnip and beet fly, potato bugs, currant worms, etc. Prepared ready for use.

5 lb. package, 30c; 10 lb. package, 50c.

In all up-to-date localities a properly equipped seed store is now considered indispensable. It is very generally admitted that the seed needs of a commu-

Local Names of Seeds

We frequently have calls for seeds under names that are not generally found in the catalogue. In most cases of this kind there is a standard catalogue name for the article and we usually locate it easily from the description the customer gives of it. If you do not recognize the desired article from the catalogue names let us know and we shall endeavor to locate it and get it for you if we do not have it in stock.

Sundry Requisites and Supplies

There are many requisites and supplies that we do not have room to list in our catalogue. We aim to have all seasonable articles on hand and can supply all of these at the time they are required. There are different makes of tools, different brands of requisites and different kinds of supplies all having merit. When we know what you prefer in any of these lines we can meet your requirements.

Bulbs, Plants, Etc.

Bulbs, Plants and Shrubs are in a class by themselves. There are bulbs for spring planting and bulbs for fall planting. Some shrubs do best when planted in the spring, others when planted in the fall. Roots of the perennial plants may be planted in fall or spring. Plants of the small fruits usually do best when planted in the spring. When ready to order your supplies in this department let us figure on your needs.

Knoxville Iowa Jan 29 =1921

Gentlemen

We do not Ishue any Seed Catalogue On account of my
Health we was obliged to Retire

Yours Truly

J.W.Bittenbender

We mail you our last Catalogue Four years old

their seed, and there cannot be better seeds for their high quality.

TERMS OF SALE.

We give no warranty, express or implied, as to purity, description, quality, productiveness or any other matter of any Seeds, Bulbs or Plants we send out, and we will not be in any way responsible for the crop.

Send Cash With the Order.—This can be done either in the form of a Money Order, Bank Draft, Express Order, Registered Letter, or cash may be sent by express. Remittances sent in any other way are entirely at the sender's risk. Small amounts may be sent in postage stamps.

Sign Your Name.—Name and address should be written plainly as possible and care exercised to have postoffice, county and state in full. If your express office or freight depot has a different name from your post office, give that also. This is very important, as we cannot send goods if we do not know where to send them.

Note Carefully the Prices.—Be sure to know whether we or you are to pay the freight or express, and bear in mind that we do not pay the express or freight charges on pecks or bushels, nor on any tools or plants, nor on potatoes, grass seeds, field seeds or fertilizers, except where we so state on the pages where the goods are priced.

In Case of Delay, Write Us.—It sometimes happens that an order is lost in coming to us, or the goods in going to the customer. Therefore, if any who order do not hear from us within a reasonable length of time, they should send a duplicate order, naming the date on which the former was sent, and the amount of money enclosed, and in what form. This will enable us to investigate the matter and fill the duplicate order quickly.

THE ALL-GROW SEED HOUSE

Use the Order Sheet.—In each copy of our catalogue we place an order sheet. It will aid us greatly if you will make your order out upon it, using one line for each article ordered, and as far as possible write them in the way they are catalogued, beginning at the front. We will gladly furnish you additional order sheets if you will write for them.

Order Early.—We are prepared to fill your order as soon as this catalogue reaches you. So please order early. You will aid us and get quicker service by doing this.

We Pay Postage or Expressage on all seeds quoted by the packet, ounce, quarter-pound and pound; also on pints and quarts of peas, beans and sweet corn, and on plants and bulbs, except where noted otherwise, and upon all goods quoted in our catalogue where it says: Prepaid by mail or express.

We Aim to Give Satisfaction.—We make our catalogue as plain as possible, both as to descriptions and illustrations.

The Prices We Quote on vegetable and flower seeds will hold good as long as stocks last. The prices on grass seed, grains, and all farm seeds, are those ruling January 1, 1917, and are subject to change. As far as possible we will fill orders for seeds that are quoted subject to variation in price, but if market values will not permit this, we will send all that money remitted will pay for.

THE ALL-GROW SEED HOUSE,

1820 Montgomery Street., Knoxville, Iowa.

BEANS—Dwarf, Bush or Snap.

Green Podded Varieties.

	Pkt.	½-Pt.	Pt.	Qt.
Hopkin's Improved Red Valentine.....	\$0.10	\$0.15	\$0.25	\$0.40
Early Improved Red Valentine.....	.10	.15	.25	.40
Burpee's Stringless Green Pod.....	.10	.15	.25	.40
Extra Early Refugee.....	.10	.15	.25	.40
Refugee, or 1000 to 1.....	.10	.15	.25	.40

BEANS—Dwarf, Bush or Snap.

Wax Podded Varieties.

Davis White Wax.....	.10	.15	.25	.40
Golden Wax .....	.10	.15	.25	.40
Improved Golden Wax, Rust Proof.....	.10	.15	.25	.40
Black Wax .....	.10	.15	.25	.40
Pencil Pod Black Wax.....	.10	.15	.25	.40

BEANS—Bush Lima Varieties.

Burpee's Bush Lima.....	.10	.15	.25	.45
Henderson's or Dwarf Seiva.....	.10	.15	.25	.45

BEANS—Pole or Running.

White Creaseback .....	.10	.15	.25	.45
Red Speckled Cut Short or Corn Hill.....	.10	.15	.25	.45
Kentucky Wonder or Old Homestead.....	.10	.15	.25	.45
Lazy Wife .....	.10	.15	.25	.45
Horticultural Cranberry .....	.10	.15	.25	.45
Early Golden Cluster Wax.....	.10	.15	.25	.45
Early Dutch Case Knife.....	.10	.15	.25	.45

THE ALL-GROW SEED HOUSE

BEETS—For the Table.

	Pkt.	Oz.	¼-Lb.	Lb.
Leonard's Egyptian	\$0.05	\$0.20	\$0.60	\$1.00
Early Egyptian Blood Turnip.....	.05	.15	.45	.90
Early Eclipse .....	.05	.20	.50	1.00
Lentz Early Blood Turnip.....	.05	.15	.45	.80
Crosby Egyptian .....	.05	.20	.60	1.00

BEETS—Mangel Wurzels.

Long Red .....	.05	.10	.25	.50
Leonard's Improved Mammoth Long Red.....	.05	.10	.25	.50
Norbiton Giant Long Red.....	.05	.10	.25	.50
Giant Intermediate or Ovoid Yellow.....	.05	.10	.25	.50
Golden Tankard .....	.05	.10	.25	.50
Yellow Globe .....	.05	.10	.25	.50
Orange Globe .....	.05	.10	.25	.50

BEETS—Sugar.

Lane's Imperial Sugar.....	.05	.10	.15	.40
French White Sugar, Red Top.....	.05	.10	.15	.40
Vilmorin's Improved Sugar.....	.05	.10	.15	.40
French Very Rich.....	.05	.10	.15	.40
Klein Wanzleben .....	.05	.10	.15	.40
Giant Rose Half Sugar, for Cattle.....	.05	.10	.15	.40

BROCCOLI.

White Cape10	.50	1.50	5.00
Purple Cape10	.40	1.50	4.50

BRUSSELS SPROUTS.

Dwarf Improved05	.15	.60	2.00
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CABBAGE.

Extra Early Etampes.....	.05	.20	.60	2.00
Extra Early Express.....	.05	.20	.60	2.00
Early Jersey Wakefield.....	.05	.25	.75	2.50
Copenhagen Market .....	.10	.25	.75	3.00
Premium Late Flat Dutch .....	.05	.20	.60	2.00
Surehead .....	.05	.20	.60	2.00
Louisville Drumhead .....	.05	.20	.60	2.00
Stone Mason Drumhead.....	.05	.20	.60	2.00

CELERY.

Golden Self-blanching, French Stock.....	.15	1.00	3.50	10.00
Golden Self-blanching, American Stock.....	.10	.50	1.50	5.00
Rose Ribbed Paris, Self-blanching.....	.10	.50	1.25	4.50
Pink Plume, Self-blanching.....	.10	.35	1.00	3.50

CARROT.

Early French Forcing.....	.05	.10	.30	.90
Early Scarlet Horn.....	.05	.10	.30	.90
Half Long Nantes.....	.05	.10	.30	.90

CAULIFLOWER.

Leonard's Early Snowball.....	.15	2.00	8.00	32.00
Earliest Dwarf Erfurt.....	.15	2.00	8.00	32.00
Early Snowball, Danish.....	.15	1.75	7.00	28.00

CHICORY.

Common .....	.05	.15	.50	1.50
Large Rooted .....	.05	.15	.50	1.50
Witloof, or French Endive.....	.05	.20	.60	2.10

THE ALL-GROW SEED HOUSE

CARDOON.

	Pkt.	Oz.	¼-Lb.	Lb.
Large Solid .....	.05	.20	.60	2.00

COLLARDS.

True Georgia .....	.05	.10	.30	1.00
Southern, or Creole.....	.05	.10	.30	1.00

CORN SALAD.

Large Seeded, Large Leaved05	.10	.20	.75
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SWEET CORN.

	Pkt.	½-Pt.	Pt.	Qt.
Cory05	.10	.15	.30
White Cob Cory.....	.05	.10	.15	.30
Chicago Market, or Ballard.....	.05	.10	.15	.30
Mammoth White Cory.....	.05	.10	.15	.30
Premo .....	.05	.10	.15	.30
Peep o' Day.....	.05	.10	.15	.30
Country Gentleman .....	.05	.10	.15	.30
Zig-Zag Evergreen .....	.05	.10	.15	.30
Stowell's Evergreen .....	.05	.10	.15	.30
Mammoth .....	.05	.10	.15	.30

Sold by measure bushel.

CORN—Pop.

	Pkt.	Oz.	¼-Lb.	Lb.
White Rice, Shelled.....		.10	.15	.25
Pearl, Shelled .....		.10	.15	.25

CRESS.

Curled, or Pepper Grass.....	.05	.10	.20	.60
True Water .....	.10	.30	1.00	3.00

CUCUMBER.

West India Gherkin. A small burr-shaped variety.....	.05	.20	.40	1.50
Early Improved White Spine.....	.05	.10	.25	.85
Peerless White Spine.....	.05	.10	.25	.85
Evergreen White Spine.....	.05	.10	.25	.85

EGG PLANT.

Leonard's Improved New York, Purple (spineless).....	.10	.40	1.00	4.00
New York Improved Purple.....	.10	.30	1.00	3.50

ENDIVE.

Green Curled05	.15	.30	1.00
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LETTUCE.

Black Seeded Simpson.....	.05	.10	.25	1.00
Grand Rapids, B. S.....	.05	.10	.25	1.00
Early Curled Simpson, White Seeded.....	.05	.10	.25	1.00
Prize Head, W. S. ....	.05	.10	.25	1.00
Improved Hanson, W. S. ....	.05	.10	.25	1.00

MUSKMELON.

Burrell's Gem .....	.05	.10	.20	.80
Osage .....	.05	.10	.20	.80
Tip Top .....	.05	.15	.25	1.00
Rocky Ford .....	.05	.10	.20	.80
Early Hackensack .....	.05	.10	.20	.80

THE ALL-GROW SEED HOUSE

PEPPER.

	Pkt.	Oz.	¼-Lb.	Lb.
Long Cayenne .....	.05	.20	.75	2.50
Bell, or Bull Nose .....	.05	.20	.60	2.00
Sweet Mountain .....	.05	.20	.60	2.00
Ruby King .....	.05	.20	.60	2.00
Chinese Giant .....	.10	.35	1.00	3.50

PUMPKIN.

Small Sugar .....	.05	.10	.30	1.00
Japanese Pie .....	.05	.10	.30	1.00
Large Cheese, or Kentucky Field .....	.05	.10	.20	.60
Connecticut Field .....	.05	.10	.20	.60

RADISH.

Leonard's Three-Leaf. Excellent forcing sort; color bright scarlet; shape, olive .....	.05	.10	.20	.70
Olive Shaped Leafless Forcing .....	.05	.10	.20	.70
Ne Plus Ultra, or Deep Scarlet Turnip Forcing .....	.05	.10	.20	.70
Scarlet Turnip White Tipped Forcing .....	.05	.10	.20	.65
Early Scarlet Globe. The best forcing variety .....	.05	.10	.20	.60
Triumph Scarlet Striped Forcing, or Startle .....	.05	.10	.20	.70
Crimson Giant Forcing .....	.05	.10	.20	.60
Long Scarlet Short Top .....	.05	.10	.20	.60
Wood's Early Frame .....	.05	.10	.20	.60
Cincinnati Market .....	.05	.10	.20	.60
White Icicle .....	.05	.10	.20	.60
Early Scarlet Turnip .....	.05	.10	.15	.50
Half Long Deep Scarlet .....	.05	.10	.15	.50
Long Brightest Scarlet White Tip .....	.05	.10	.15	.50
Improved Chartier .....	.05	.10	.15	.50
Long White Vienna, or Lady Finger .....	.05	.10	.15	.50
White Strasburg .....	.05	.10	.20	.60
Rose China Winter .....	.05	.10	.20	.65

SALSIFY.

Large White .....	.05	.10	.20	.80
Mammoth Sandwich Island .....	.05	.15	.25	1.00

SPINACH.

Savoy Leaved .....	.05	.15	.35	
Large Leaved Viroflay, or Thick Leaf .....	.05	.15	.35	
Round Leaved .....	.05	.15	.35	

SQUASH—Winter Varieties.

Fordhook .....	.05	.10	.30	1.00
The Delicious .....	.05	.10	.30	1.00
Hubbard .....	.05	.10	.25	.90
Marblehead .....	.05	.10	.30	1.00
Leonard's Warty Hubbard .....	.05	.10	.30	1.00

TOMATO.

Leonard's Early Market .....	.05	.25	.60	2.10
Chalk's Early Jewell .....	.05	.25	.60	2.10
Matchless .....	.05	.25	.60	2.10
Earliana .....	.05	.25	.60	2.10
Crine's June Pink .....	.05	.25	.60	2.10
New Stone .....	.05	.25	.60	2.10

TURNIP.

Extra Early White Milan .....	.05	.10	.25	1.00
Extra Early Purple Top Milan .....	.05	.10	.25	1.00
Early Snowball .....	.05	.10	.15	.60
Early White Flat Dutch, Strap Leaved .....	.05	.10	.15	.60
Early Purple Top, Strap Leaved .....	.05	.10	.15	.60

THE ALL-GROW SEED HOUSE

BIRD SEEDS.

	$\frac{1}{4}$ -Lb.	Lb.
Canary .....	.10	.25
Hemp .....	.10	.20
Lettuce .....	.15	.50
Maw .....	.15	.50
Millet .....	.10	.20
Rape, German Bird .....	.10	.20
Mixed Bird Seed .....	.10	.20
Sunflower .....	.10	.20

CLOVER.

Mammoth or Large Red	Market Price
Medium Red	Market Price
Alsike, or Swedish	Market Price
Crimson, or Scarlet	Market Price
Alfalfa, or Lucerne	Market Price
White Dutch	Market Price

Prices subject to changes of the market.

WATERMELON

	Pkt.	Oz.	$\frac{1}{4}$ -Lb.	Lb.
Phinney's Early .....	.05	.10	.20	.80
Vick's Early .....	.05	.10	.20	.80
Cole's Early .....	.05	.10	.20	.80
Sweetheart .....	.05	.10	.20	.80
Ice Cream .....	.05	.10	.20	.80
Monte Cristo .....	.05	.10	.25	1.00
Triumph .....	.05	.10	.20	.80
McIver's Sugar .....	.05	.10	.20	.80
Kleckly Sweets, same as Monte Cristo .....	.05	.10	.25	1.00

NASTURTIUM.

Tall, or Garden .....	.05	.10	.20	.60
Dwarf Mixed .....	.05	.10	.20	.60

ONION SEED.

Leonard's Onion Seed is endorsed by market gardeners everywhere. Each year adds to its popularity with them. This is the surest indication of merit.

Leonard's Early Yellow Cracker .....	.05	.15	.30	1.10
Early Flat Yellow Danvers .....	.05	.15	.30	1.10
Yellow Dutch, or Strasburg .....	.05	.15	.30	1.10
Extra Early Flat Red .....	.05	.15	.35	1.20
Large Red Wethersfield .....	.05	.15	.35	1.20
Louisiana Creole. Color, brownish red; popular at south colored; the best red skinned variety for market purpose; well adapted for all soils; the best red sort for muck land .....	.10	.20	.40	1.50
Southport Red Globe .....	.05	.20	.35	1.35

ONION—Imported Sorts.

Red Bermuda .....	.10	.20	.50	1.85
White Bermuda .....	.10	.20	.50	1.85

LEONARD'S ONION SETS.

We are now and for many years have been the leading Onion Set Growers. We claim a superiority for our product, which comes from superior knowledge in planting, harvesting, storing and shipping as a result of long-continued experience and large operations. For bushel and peck quantities write for market prices. Any variety sent postpaid.

	$\frac{1}{2}$ -Pt.	Pt.	Qt.
Red Bottom Sets .....	.10	.15	.25
White Bottom Sets .....	.10	.15	.25
Yellow Bottom Sets .....	.10	.15	.25

(Prices Continued on Back Pages)

We use every effort possible in the selection of our seeds, and feel justified in saying that all our seeds are the purest and best to be found, but at the same time, their being so many things beyond the control of man that spoil the best seeds and cause poor crops, that it is impossible to guarantee seeds. Therefore, while we exercise great care to have all seeds pure and reliable, we sell no seeds with warranty, expressed or implied in any respect, and are not in any way responsible for the crop.

Prices of Seeds vary. We quote Market Values upon request and always give our customers the benefit of the lowest price that the market condition will warrant. Special prices on a general list will be given upon application. **LET US HEAR FROM YOU.**

ARTICHOKE

The Globe Artichoke is cultivated for its flower-heads, which are cooked like asparagus. Plants set in any good soil, with slight covering in winter, will remain in bearing several years.

Large Green Globe. The standard variety.

Jerusalem. This variety is not produced from seed, but is cultivated for its tubers which are especially valuable for stock feeding.



**GREEN GLOBE
ARTICHOKE**

and covering from six to eight inches. On the approach of winter cover with manure or compost; fork the beds early in the spring, and apply a dressing of salt. Cut for use the second year after planting, in permanent bed.

ASPARAGUS

Fr., Asperge. Ger., Spargel.

Sow one ounce for sixty feet of drill. Sow in March or April, in rows one foot apart. When two years old transplant into permanent beds, which should be well and deeply manured, and trenched to the depth of two feet. Set the plants (in rows) from three to four feet apart, and two feet in the rows, spreading out the roots.

ASPARAGUS SEED

Columbian Mammoth White. A new and entirely distinct variety that produces shoots that are white, and remain white as long as fit for use.

Conover's Colossal. The standard variety; of large size, tender and of excellent quality.

Palmetto. It is of very large size, even and regular in growth and appearance. It is a very early sort, and immensely productive and of the best quality.

ASPARAGUS ROOTS

Two Years Are Gained if Roots Are Planted.

Columbian Mammoth White.

2-year-old roots.

Conover's Colossal. 2-year-old roots.

Barr's Mammoth. 2-year-old roots.

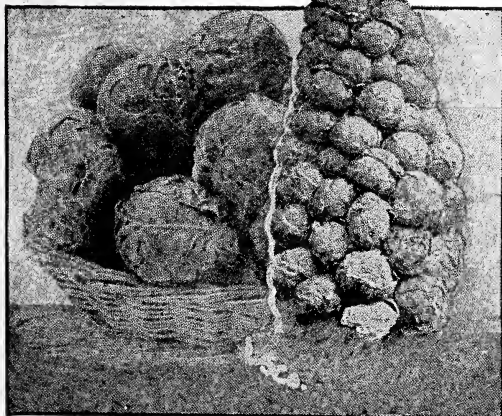
Palmetto. 2-year-old roots.

Prices on any variety of 2-year-old roots upon request.

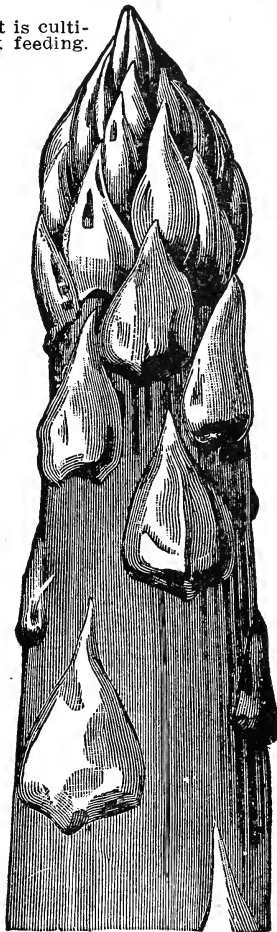
BRUSSELS SPROUTS

**One Ounce of Seeds to
100 Yards of Row.**

A variety of the Cabbage family, possessing the peculiarity of bearing upon its stem or stalk from 50 to 100 buds resembling miniature Cabbage heads. The leaves composing these heads resemble Savoy Cabbage in their crumpled texture and also in their color. The heads or buds, from 1 to 2 inches in diameter, form one of the most delicious garden vegetables, only equaled by the Cauliflower. Treat same as Cabbage. Autumn-grown Sprouts, drilled in May and transplanted in July generally do best, as the plants are quite hardy and the buds mellow under frost.



BRUSSELS SPROUTS



**ASPARAGUS
CONOVER'S COLOSSAL**

BROCCOLI

One Ounce of Seed to 100 Yards of Row.

A plant much resembling the Cauliflower, and like it derived from the wild Cabbage. Broccoli requires a longer season to develop than Cauliflower. It has more numerous and stiffer leaves, and the heads are smaller.

Large Early White. Large white head, resembling Cauliflower.

BUSH BEANS

Beans are easily frost killed, so plant them at corn planting time on light dry land. Cold, wet weather will rot the seed in the ground and fresh manure causes a rank growth of vine with a lack of pods.

If hand cultivated, beans can be drilled in poor soil as close as eighteen inches; but in rich soil with horse cultivation thirty inches is required. Drill six beans to the foot and cover one inch deep; or plant in hills eighteen by twenty-four inches. One quart should plant 250 feet and two bushels plant an acre. Expect a picking after six weeks. Plant every third week for a succession up till Aug. 1st in the latitude of Chicago. Pick beans before the bulge of seed appears, and pick beans clean to continue the plants bearing. Give beans shallow cultivation, and do not till the soil when the plant is in bloom or the plant in self-defense will drop its bloom. To cultivate when wet is to invite rust.

Green Pod Varieties.

Refugee or 1000 to 1. The vines are large, spreading, exceedingly hardy, with small smooth leaves, very late and bear long cylindrical green pods of excellent quality. Highly esteemed for late planting and for use as Pickles.

Black Valentine. A very hardy and productive green podded sort, with strong, vigorous vines. Pods rather flat but very handsome, much longer, straighter, less fleshy than the Red Valentine, the plant a little more spreading, and in season a little later.

BUSH BEANS, Green Pod—Continued

Burpee's Stringless Green Pod. A very desirable green podded snap sort for the home garden and largely grown for the market. The vine is vigorous, spreading and productive. The pods are larger than those of the Red Valentine, but are quite as fleshy, of equally high quality and remain crisp and tender longer.

Early Red Valentine. For snaps there is nothing superior to this variety among the dwarf green podded sorts both for the home and market garden and many prefer it to the wax varieties. Vines medium to large, erect, with dark green leaves. Pods medium length, curved, cylindrical, with crease in back, very fleshy, crisp and tender.

Early Mohawk. One of the oldest and best known sorts. The pod is green, thick, flat in shape, of fair quality, developing a slight string as it matures. Is ready to pick 48 days from planting, and will resist a slight degree of frost very successfully.

Black Valentine. This excellent variety is a great improvement over the old standard early Red Valentine, being one-third longer than that variety with pods perfectly round and straight and of excellent quality. It also has the additional advantage of being suitable for both early and late planting and is extremely hardy. It will withstand early and late frost, is an excellent shipper, a large yielder, and of very handsome appearance.

Extra Early Refugee. Very much earlier than the Old Style Refugee or 1000 to 1. More dwarf and compact in growth.

Longfellow. This new bean has long green pods, is exceedingly prolific, always solid, a delicious flavor, is tender and remarkably early. It matures its crop very regularly and withstands adverse conditions well. A good bean for market or home use.

Long Yellow Six Weeks. The vine is large, vigorous, branching and productive, with large leaves. Pods long, straight, thick, flat in shape, green in color, of good quality when young and fair as they near maturity.

Tennessee Green Pod. This dwarf snap bean, although new to the Seed Trade, has for several years been grown in the South, and wherever known is freely spoken of in terms of highest praise.

Dwarf Horticultural. Vines very productive, compact, upright, with large leaves. Pods medium length, cylindrical, curved, with splashes of bright red on a yellowish ground.

Pheasant Eye. A valuable new green podded variety. Vines hardy, sturdy, well leafed. Pods long, meaty, stringless and of excellent quality.

Bountiful Beans. This new green podded Bush Bean is a heavy cropper and very early, of fine shape, stringless and good quality.

Giant Stringless Green Pod. A very hardy, stocky vine, pods long, round and green in color, of exceptionally fine quality and stringless throughout its entire growth.

Low's Champion. Large, green, flat, stringless pods.

Early Monawk.

Improved White Kidney.

Boston Pea Bean.

Prolific Tree.

Navy.

Goddard or Boston Favorite.

Red Kidney.

Large White Marrow.

DWARF LIMA VARIETY

As limas require even more heat than other beans, a failure will follow a too early planting. The beans when favorably planted throw out from what we term the bean's eye a stout root; this root in turn lifts the bean above the ground. The bean then opens its halves, or false leaves or cotyledons and the true leaves soon follow. If in planting the bean is thrust into the soil eye down and just below the surface, the bean is in a favorable position to begin its growth. However, the crop can be secured though with a lesser percent of germination by dropping the bean in any position.

Bush limas are earlier than pole limas and are planted in twenty-four to forty inch drills, three to six inches apart in the row according to varieties. One quart plants one hundred twenty-five to one hundred fifty feet.

Treat pole limas like other pole beans, using one quart to one hundred hills.

Burpee's. The bush form of the true, luscious, large lima.

Fordhook. The bush form of the chubby or Potato Lima.

Henderson's. This is a bush form of the small Seiva pole bean.

BUSH BEANS, WAX POD

Davis White Wax. This bean is adapted alike for the canner, market gardener, shipper or amateur. The dry bean is large, kidney-shaped, and white in color, making it one of the best for cooking in a dry state. Pods are long, meaty, flat in shape, and of a beautiful yellow color and fair quality.

Golden Wax. The old standard wax sort. Productive and early, with yellow semi-round pods of good quality; ready to pick 49 days from planting.

Improved Golden Wax. Rust proof, an improvement on the old style Golden Wax. Pod is semi-round, yellow, of good quality and has no string. Ready for picking 47 days from planting.

Prolific Black Wax. The old standard Black Wax Bush Bean. It is so good that it is worthy of special notice. The pods are round, brittle, of handsome golden yellow color, and of buttery flavor when cooked.

Webber Wax. Unquestionably one of the best wax podded beans ever introduced. It is a market gardener's bean, having been originated in one of the best market gardening sections of the West. It produces a deep golden colored pod of good length; shape semi-round, thick meaty, stringless and of exceptional quality. Vines strong, holding the pods well up, with good leaf covering and bearing in profusion.

Keeney's Rustless Golden Wax. Combines hardiness and productiveness with fine quality. A strong growing bush variety of remarkable vigor and freedom from rust. The pods are meaty and well filled, thick, flat, when young and semi-round later; a very desirable variety.

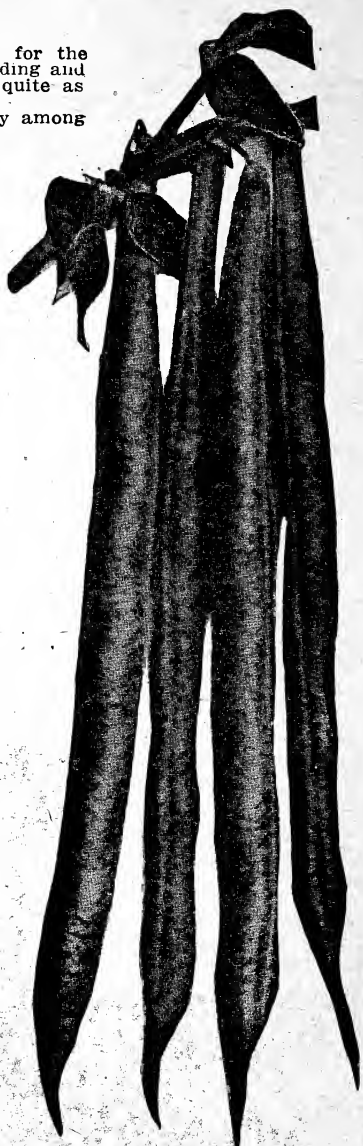
Currie's Rust Proof Wax. An excellent Wax Bean in every respect. Rust proof, tender, thick flat pods of very good quality. Very little string in early stages, developing a little when nearing maturity. Fit for table use 47 days after planting.

Pencil Pod Black Wax. Pencil Pod Black Wax grows a taller, stronger and more vigorous bush than the Improved Prolific Black Wax, which is one of its parents. The other parent is the Round Pod Refugee or Thousand to One, and from this latter source the Pencil Pod Black Wax gets much of its vigor, hardiness and productiveness, and its long, slender, straight, handsome pod, shaped very much like a pencil.

Refugee Wax. A perfect Refugee with Wax pods. Pods long, round, and of a golden yellow color. One of the earliest, quality excellent, and is fit for picking 57 days from planting. A very fine canning bean.

Wardwell's Kidney Wax. Hardy and productive, pods long, broad, thick, flat and of a delicate waxy yellow, of excellent quality and with no string in the early growth, ready for table 48 days from planting.

Hodson Wax. The creamy-white flat pods are six to seven inches long, by three-eighths of an inch wide. The pods are late in maturing and are unusually free from blight or rust.



EARLY RED VALENTINE

POLE BEANS

The pole bean climbs, sometimes needing a little training over any support given to it, be that support the growing corn stalk; rough stakes from the wood lot; bamboo or painted stakes; chicken wire or a convenient fence; supported wires or strings or some porch or trellis. A good practice is to set firmly in the ground every three or four feet each way, poles that are, when set, about six feet. Some time after bunch beans are planted, six or eight beans are planted one inch deep near the base of each stake and later thinned to three or four plants to the pole. One-half bushel of pole beans generously plants an acre, and one pint plants one hundred hills.

The pole bean bears over a longer period than the bunch bean and is generally considered of superior quality, but it requires more labor, longer time to mature, and is more sensitive to adverse climatic and soil conditions. Note that this vine turns only one way around its support.

When too old for use as a green snap bean, use any bean shelled, or still later, when it is hard and dry, it remains equally serviceable.

Kentucky Wonder. Vine vigorous, climbing well and very productive, dry beans, long, oval, dun-colored.

Scarlet Runner. A great favorite, both ornamental and useful.

London Horticultural, or Speckled Cranberry. Beans large, ovate, splashed and spotted with wine red, and of the highest quality, either green or dry.

Red Speckled Cut Short. (Corn Hill.) This is the best sort to plant in hills of corn.

Dutch Case Knife. Vines moderately vigorous, climbing well, but twining more loosely than some and so may be used for a corn hill bean.

Dreer's Improved Lima. Also called Challenger Lima, Thorburn's Lima, Potato Lima, etc. This is a bean of rather peculiar shape, being thick and plump rather than flat and oval.

King of the Garden Lima. This is the grand old standard market and family sort, which nothing can displace from public favor.

White Creaseback. This variety is especially valuable for its extreme earliness.

Lazy Wife. Immensely popular everywhere.

Small White Lima, Carolina or Sieva. Very early and productive, pods short, curved, thin, flat, beans white, small, kidney-shaped.

Large White Lima. The large lima is a general favorite.

Worcester Pole..... **Early Golden Cluster Wax.....**

Brocton Pole..... **Golden Champion Wax**

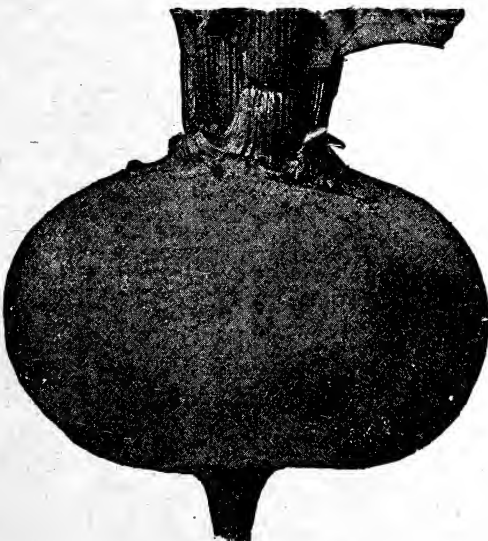
Siebert's Early Lima.....

THE SEED SHORTAGE

So urgent has become the European demand for Food due to the war that very frequently their seed crops have had to give way to the growing of such crops as may be utilized for food. In many cases, the majority of experienced employees of the best foreign seed growers have been called to the war, leaving behind only those who are either too young or too old for war services to look after the growing and harvesting of seed crops. This will of necessity mean a lessened production and perhaps a production of some inferior seed. In America adverse weather conditions from planting until harvest time, early frost, anthracnose in beans, etc., joined with the unusual foreign situation to make the seed production for this year much less than normal. Therefore we advise the early buying of seed before some of the varieties wanted are exhausted.

TABLE BEETS

As soon as the soil can be worked in spring sow beet seed in twelve to eighteen inch drills for hand hoeing or eighteen to thirty inch drills for horse cultivation, dropping twelve seed to the foot. Cover the beet seed, which is really a beet fruit containing one or more seeds, one-half inch deep. Later thin the beets to stand five to the foot. Planted April first the early varieties should be marketable June first or the crop may be advanced several weeks by starting under glass and transplanting to the open, first giving the beet tops a severe pruning. Use one ounce of seed to one hundred feet of row, and five or six pounds to the acre. Beets sown in early July should be ready to store in pits or in sand in the cellar when freezing weather begins.



CROSBY'S EGYPTIAN

Crosby's Egyptian Beet. The name of this variety is misleading, as it resembles the Egyptian only in its extreme earliness. They are also more spherical than the Extra Early Egyptian and we think of better quality. One of the best for early planting out of doors.

Crimson Globe. This is one of the finest beets yet introduced. Roots are not large, but very handsome. Round, and a clean, smooth surface. Leaves very small, with slender stems.

Early Egyptian. The well-known early variety. Color, extra dark, shape flat, quality excellent.

Bastians. An extra early variety, much esteemed by market men East and South. Color light.

Half Long Blood. One of the best for winter use. The roots are only half as long as the Long Blood, but weigh as much on account of their thickness. They are always smooth and handsome and their rich, dark red flesh is very sweet, crisp and tender, never becoming woody, even in the exposed portions.

Long Smooth Blood. The standard long late sort. Very dark, blood-red flesh, quality fine.

Early Bassano. A good early variety, similar to Egyptian in shape, but of lighter color.

Swiss Chard, or Silver. Used for its leaves.

Edmand's Early Blood Turnip. The best sort for general crop. In quality one of the finest, exceedingly dark, shape globular, having only one tap root. Very popular with market men.

Detroit Dark Red Turnip. Quality good, sweet and tender; color deep red; roots are turnip shaped, with small tap roots.

Dewing's Early Blood Turnip. A good variety for main crop. Keeps well. Like Edmand's, but lighter color.

Lentz Turnip. Of similar size and shape to the Bastian Turnip; top small. Early and profitable.

Early Eclipse. A very early maturing beet especially desirable for the home garden. Top of medium size. Root nearly globular, with a small tap and small collar. Flesh bright red, zoned with white, very sweet, crisp and tender, especially when young.

MANGEL WURZELS

Mangel Wurzel, called also stock beet, or cow beet, is a very large beet growing mostly above the ground and all stock eats it greedily. Plow the soil for it deeply and in May or June, plant six Mangel seed to the foot in two to three foot rows, later thinning to a ten inch stand. One ounce sows generously one hundred feet of row, and an acre requires five to six pounds. When a light frost has occurred, lift the roots, store in pits or cellars and the mangels are soon ready for feeding.

Long Red. A large, long variety grown for stock feeding. It stands up well above the surface; color light red; flesh white and rose colored.

Yellow Globe. Globular shaped roots. More productive than Long Red in shallow soil. Very nutritious and a good keeper.

Golden Tankard. Shape cylindrical, color deep rich yellow, flesh yellow circled with white. Unequaled for feeding stock.

Norbiton Giant Long Red. Very large, excellent variety for feeding stock.

Orange Globe. We think this one of the best varieties of mangel wurzel.

SUGAR BEETS

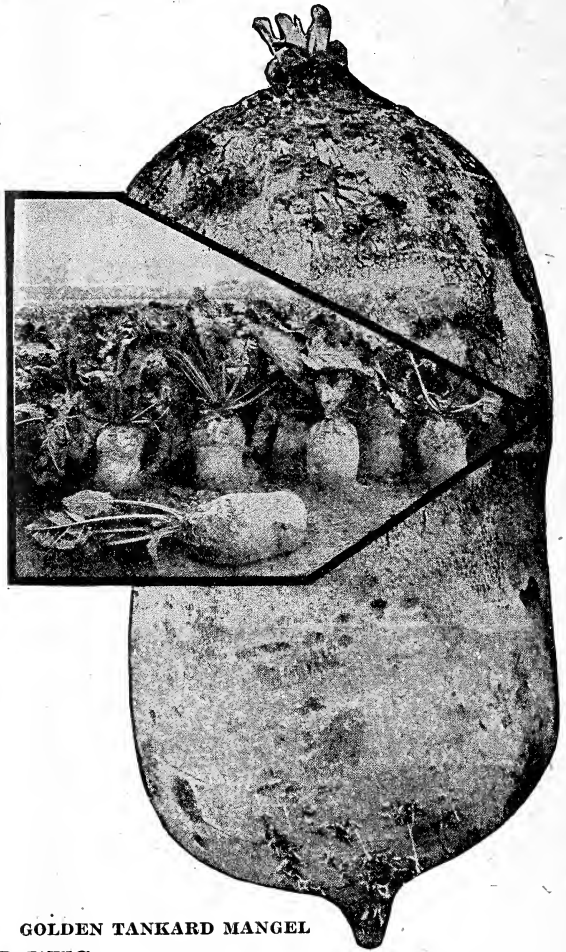
The Sugar Beet, grown for the manufacture of sugar, and frequently used for stock feeding, is a yellowish white beet, smaller than the mangel, but containing a much greater percent of sugar. In growing the sugar beet is treated like the mangel, except that only six or eight inches of space is given each beet in the row.

Vilmorin's Improved Sugar. In general the most desirable beet for the factory is the one containing the largest percentage of sugar. In this variety we have one of the richest beets in cultivation.

Klein Wanzleben. A little larger than Vilmorin's Improved, yielding from twelve to eighteen tons per acre, and containing about the same amount of sugar. It grows below the surface, and the green leaves are rather large and spreading, with wavy edges.

Lane's Imperial Sugar. Good for making sugar, also stock feeding. A hardy and productive sort. Yields fourteen to sixteen tons per acre, and contains about 16 per cent of sugar.

Giant Half-Sugar. This unites the large size of the mangel with the greater feeding value of the sugar beet. The roots average ten to twelve inches, and the outline is that of a broad, thick wedge. The upper portion is of a soft bright pink, shading lighter toward the bottom where the lower portion for about one-third the length is white.



GOLDEN TANKARD MANGEL

CARROTS

The carrot, whether used raw, fried, boiled, or stewed; used alone or combined with other vegetables or meat, is not surpassed in nutritious healthfulness by any other vegetable catalogued. Plant carrots in the latitude of Chicago from the time the soil can be worked in Spring till July 1 in one to two-foot rows for hand cultivation, or in thirty-inch rows where a horse-drawn tool is used. Use one ounce of seed to one hundred feet of row, three or four pounds to the acre, covering one-half inch deep, and later thin to a four-inch stand. To cultivate the rows at an early date sow radish seed, which germinate quickly, with carrot seed, which germinate slowly. Do not overlook the value of this crop as a stock food.

Early Short Horn. A fine early variety, good for home use. Eastern market gardeners use this sort for bunching.

Guerande, or Ox Heart. Tops small for the size of the roots, which are comparatively short, but often reach a diameter of 7 inches, terminating abruptly in a small tap root. Flesh, bright orange, fine grained and sweet. This is a desirable variety for soil so hard and stiff that longer growing sorts would not thrive in it. When young, excellent for table use, and when mature equally good for stock.

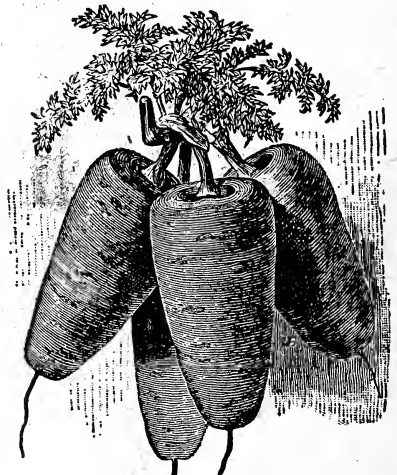
Chantenay. Tops medium size; necks small; roots tapering slightly, but uniformly stump rooted and smooth; color, deep orange red; flesh very crisp and tender. Although this is a medium early sort, it furnishes roots of usable size as early as any, is a heavy cropper, and is undoubtedly one of the best for both the market and private garden, while its great productiveness makes it very desirable as a field sort.

Danvers. Grown largely on account of its great productiveness and adaptability to all classes of soil. Tops medium sized, coarsely divided. The smooth and handsome roots are deep orange, of medium length, tapering uniformly to a blunt point; flesh sweet, crisp, tender and of a deep orange color. This is a popular field variety, and although the roots are shorter they produce as large a bulk as the longer field sorts and are more easily harvested.

St. Valery. A good late variety. Grows long, shape uniform, tapering from a wide shoulder to a point.

Large White Belgian. Grows one-third out of the ground. Root pure white, green above ground, with small top. Flesh rather coarse. The roots on light, rich ground, grow to a large size, and are extensively grown for stock feeding.

Improved Long Orange. The most popular of the older sorts for farm use on mellow soil. An improvement obtained by years of careful selections of the best formed and deepest colored roots of the old Long Orange. Roots comparatively shorter than the Long Orange and smoother, but so uniform and true that the bulk of the crop will be greater.



DANVERS CARROT

CAULIFLOWER

Cauliflower, while it resembles cabbage and requires very much the same treatment as outlined under and for cabbage, is not so hardy as cabbage, needs more water, needs more cultivation and requires generally treatment superior to cabbage. Cauliflower cannot be expected to mature satisfactorily in hot, dry weather, and as it requires one hundred ten to one hundred fifty days for different varieties to mature, its planting should be correctly timed. Start cauliflower under glass or where cabbage plants can be wintered, winter cauliflower. One ounce gives two thousand five hundred plants and one-fourth to one-half pound of seed plants an acre. When the head or heart of cauliflower, as you may think or feel of it, called the "curd," appears, tie the outer leaves over the head or pin these leaves with wood pins or beef skewers so the leaves will shade and blanch the curd and then cut the curd before it starts to branch. Remember that all the enemies of cabbage emphatically attack cauliflower and are to be combated in a like manner.

Early Snowball. The leading cauliflower in all sections, and unquestionably the purest strain of cauliflower seed to be had. Heads uniform, of desirable market size and of snowy whiteness. After seven years' competitive tests it is pronounced by expert cauliflower growers to be the best for both early and late planting.

Large Algiers. A valuable late sort sure to head, of the best quality, and very popular with market gardeners everywhere. Plant large, but of upright growth, the leaves protecting the heads so that they will endure uninjured a frost that would ruin other sorts. One of the very best of the late sorts.

CELERY

Press celery seed into the ground, do not try to cover it, and when seed is kept wet and not above 60° F. germination occurs in ten to twenty days. Celery needs four to five months from seed to use, so very early celery should be started in hotbeds after January, and when two inches high transplanted or thinned to a space of two inches. Later trim the tops to produce stocky plants and when five inches high set where plants are to mature, first trimming off one-third of the roots and leaves. Celery seed may be planted out of doors north of the Ohio in April and treated as outlined above. Given sufficient water, celery can be grown on any good garden soil and one ounce of seed gives above 6,000 plants.

When almost grown, celery must be blanched; that is, the light is excluded from the edible stock by the use of boards, earth, paper or other covering. If boards are used rows can be set as close as thirty inches, if earth blanched forty-eight inches or more is better. Set the plants six inches apart in the row and press the soil firmly about the roots. Again celery is set in solid beds eight inches each way, and the shade of the crowded bed does the blanching.

With a few stalks in a garden a tile set over the plant or a wrapping of paper answers the purpose. If earth is used in blanching it should be drawn about the plant to one-third its height and repeated twice a few days apart till leaves only are exposed. Do not cultivate hill or disturb celery when damp or rust may occur. In this hilling with earth called handling place a peg at end of row with string to it and pass string about each plant so as to prevent earth from falling into the heart during the work. To store, celery should be only partly blanched.

When freezing begins lift plant with some soil and store in a cave, cold frame or cellar, temperature close to freezing point preferred. Use slats to keep celery in long six inch wide spaces, for if too deeply packed it may heat and spoil. If plants wilt water the roots, not the stalks.

Celery matures best in cool moist weather, so the grower farther south may delay this planting calendar to fit his own market and convenience.

Golden Self-Blanching. The best self-blanching sort. It acquires a handsome golden color without having to be hilled up, which makes it a valuable market sort.

White Plume. A good self-blanching sort, good for fall use, but does not keep well.

Giant Golden Heart. This variety attains a large size, but still remains crisp and tender. It is a fine keeper and is the favorite on the Chicago market.

Kalamazoo. This is the variety used by the celebrated celery growers of Kalamazoo, Mich., and is of great merit.

Perfection Heartwell. A finely flavored, good keeping sort, hardy and solid.

Crawford's Half Dwarf. The favorite variety in eastern markets; a good keeper of vigorous growth.

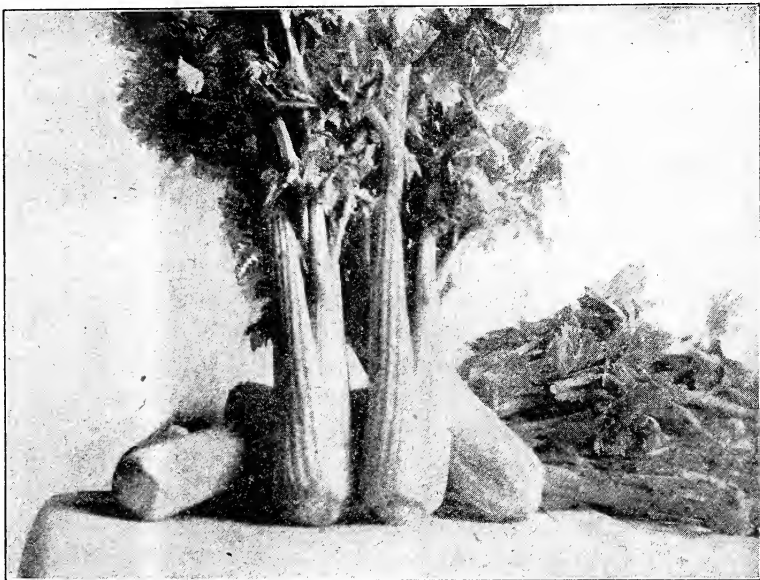
Pink Plume. Similar to White Plume, but having stalks suffused with pink.

Giant Pascal. This is the best keeper of all of the late sorts; very solid and crisp. This variety is unsurpassed for market garden.

Winter Queen. It has the strong, robust growth of the Giant Pascal, but the plants, being only of medium height, are of better length for bunching for market as well as more desirable for serving on the table.

Evan's Triumph. One of the best late sorts.

Boston Market. For many years one of the most popular sorts in the markets of Boston.



GOLDEN SELF-BLANCHING

GERMAN CELERY OR CELERIAC

Large Smooth Prague. Has a large smooth root, and is the finest of all celeriac.

Apple Shaped. Not as smooth as the above but of good form.

Turnip Rooted. This is the ordinary and well known variety.

CABBAGE

Cabbage grows successfully on a wide variety of soils and experience points to liming, deep plowing and heavy manuring as successful practices.

Cabbage plants when properly hardened by gradually being brought to a low temperature and the quantity of water in them diminished will stand any frost and some considerable freezing. Yes, a cabbage plant raised at a high temperature and full of water will be killed by even a light frost. Cabbage can be grown by planting the seed heavily where the crop is to grow and thinning the plants, but a better practice is to raise the plants without crowding in a seed bed, which is not richer than the field to which the plants go and transplant, if possible on a cloudy day, watering the plants if the soil is dry. South of the Ohio seed is frequently planted out of doors in September and wintered in cold frames or in very southern localities the plant is Fall set on a shady side of the furrow to avoid as much as possible the deadly freeze and thaw. For early cabbage north of the Ohio, sow seed in hot beds in February, transplant to cold frames in March, and set outside in April, or sow seed out of doors as soon as the soil can be worked in spring, covering the seed one-third inch deep. All vegetable plants are best when grown without check, so let as much soil adhere to the roots of the plant in transplanting as will hold, and set up to the first leaf. At this time the plant should have four to five pairs of leaves and be four to six inches high.

Set small varieties to be worked by hand as close as eighteen inches each way, while large late varieties, horse cultivated, need thirty or more inches each way. A convenient setting for Wakefield Cabbage is eighteen inches apart in thirty-inch rows. Seven out of eight heads can be counted upon to mature, and if yourself or the market is cabbage hungry, cut when the hearts are solid. Germination occurs in four to ten days, and cutting of well-grown early cabbage begins frequently in sixty days from transplanting. One ounce of seed will readily give three thousand plants, and one-fourth pound is sufficient for an acre.

For home use, plant for a succession and study the market's demands; don't grow big sauerkraut factory heads if your market asks small cabbage for home use.

Late varieties are frequently ill-timed in planting. Nitrate of Soda will hurry the crop if too late, and if heads are so early as to begin bursting, push the head to one side far enough to tear off the roots on one side.

When club root appears, lime the soil heavily and do not plant brassica, that is, cabbage, turnips, cauliflower and kindred crops upon this sick soil for two or three years.

Fight cabbage worms with Paris Green, Hellebore, or other good stomach poison.

For cabbage maggots, pour kerosene emulsion about the roots or cut tarred paper in three-inch squares, split the square to the center, and place this collar on the ground about the plant when the plant is set.

For plant lice or aphids use tobacco tea or kerosene emulsion, and remember, these poisons kill by contact and do not do their work long after spraying like a stomach poison.



EARLY JERSEY WAKEFIELD

Early Jersey Wakefield Cabbage. The most popular of the pointed head varieties. Exceedingly early, a good cropper, heads of good size, solid and uniform.

Early Spring Cabbage. The earliest flat head, nearly as early as Jersey Wakefield. Yields more than the early pointed heads. Solid, uniform and finely grained heads.

Early Winningstadt. An early pointed head variety of excellent quality, not as early as the Wakefield but larger.

Henderson's Early Summer. A standard summer variety. Heads large and solid.

Fottler's Early Brunswick. An early fall variety, well known and popular.

All Head Early. One of the finest early flat-head cabbages.

Early York. A standard pointed head variety, second early.

Early Dwarf Flat Dutch. An early cabbage of good size. Heads are flat and very solid.

Henderson's Succession. A good summer cabbage; also makes a good cabbage to succeed itself.

All Seasons. A fine variety for any season, a good shape and size.

Volga. One of the earliest main crop cabbages of superior quality. Very desirable where a large, uniformly round head with short stem and compact growth is wanted.

Early Drumhead. This popular variety follows the Faultless in heading and is one of the most valuable varieties grown.

Louisville Drumhead. This fine cabbage is very popular with the kraut makers. It is a medium late variety.

Faultless Cabbage. The favorite second early cabbage. The product of this seed outsells any other second early cabbage. It can be marketed in the early summer, during midsummer, in the fall and early winter, making it the best all purpose variety.

Glory of Enkhuizen. This is an excellent mid-summer variety. It comes in about a week earlier than All Seasons, makes a nice large head, has few outer leaves and can be planted close. Our tests show it to be worthy of a place among the new varieties of merit and we can recommend it as a good addition to the list.

Copenhagen Market. A new early variety, popular with market gardeners. It is one of the finest early round-headed cabbage in cultivation. It is desirable on account of the remarkable characteristic of maturing the heads all at the same time, enabling the grower to gather his crop with less expense and permitting the cleaning of the land at the first cutting.

The kitchen gardener or critical market man who wants a quick and even maturing cabbage that resembles Danish Ball Head will find Glory of Enkhuizen and Copenhagen Market unquestionably the best.

CABBAGE



PREMIUM FLAT DUTCH

Cabbage Seed is one of the things that requires care in the selection. Price should be held in minor importance compared with quality. The best is always the Cheapest.

The Lupton. The Lupton Cabbage is the result of an effort to combine in one variety the best qualities of the second-early and the late sorts. It is a little earlier than any one of the various strains of Flat Dutch and Drumhead.

Premium Flat Dutch. This variety of late cabbage is a standard in all sections for winter use. It makes a large solid head which keeps long without bursting, and is adapted to a more varied climate than probably any other variety we grow.

Improved American Savoy. Closely approaching the cauliflower in delicacy and delicious flavor. The best of all the Savoy for general market or home use. It has a short stump, grows to a large size, is compact and solid, and is a sure header.

Mammoth Rock Red. The largest heading of any red sort. Heads are hard, of deep red color, quality excellent.

Red Drumhead. The standard pickling variety. A good keeper.

Prairie Winter Cabbage. This new cabbage is a direct cross of the Luxemburg and the Holland and combines the good points of both. It has the shorter stem and more lasting color of the Luxemburg with the rounder head of the Holland. The combination gives a cabbage that is superior to either.

Large Late Drumhead. A late variety of large size.

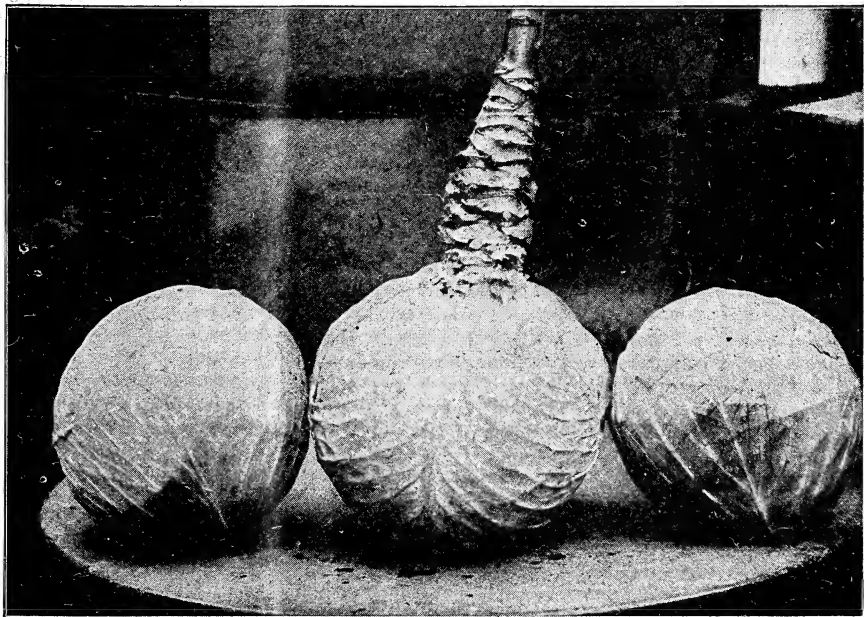
Sure Head. A fine variety for main crop. A good shipper and sure header.

Stonemason Drumhead. A late large heading variety; but not as fine grained as others.

Marblehead Mammoth. A large late variety of fairly good quality.

Danish Ballhead Cabbage. For a winter cabbage for early spring sales some gardeners consider this variety excellent. It has been selected and perfected for more than fifty years by the Danish gardeners, who prize it so highly that they grow it almost exclusively for winter cabbage, and annually export large quantities of it. It is hard heading, and long keeping cabbage. Heads round as a ball, solid, fine grained, has few outer leaves, tender, crisp and of unexcelled flavor.

Holland. The favorite winter cabbage with market gardeners. It is as hard as a rock, and a small head will weigh as much as a large head of any other variety. The leaves lap over and make a head in which there is no waste.



HOLLAND WINTER CABBAGE

SWEET CORN

Plant corn every two weeks for a continuous supply and north of the Ohio from late April to late July. Plant corn in three or four foot drills, dropping a grain every eight to sixteen inches, or plant in hills three or four feet each way, giving six grains to the hill and later thinning to three stalks. Corn should be planted about one inch deep, planted deeper in sand than in heavy clay; planted deeper later in the year when the soil is warm; dwarf varieties closer together than the larger ones and a given quantity of seed of a small grained variety plants a larger area than does a like quantity of the large grained. One quart generally plants two hundred fifty hills and one peck is necessary to the acre. Sixty-five days is a short time to maturity. Plow deeply for corn, cultivate shallow and pick corn before it is too old. If the goodness of new corn tempts a too early planting, do not blame the resulting failure on your seedsman.

Mammoth White Cory. The ears are twelve rowed, white cobbled, and covered with very large white grains of good quality.

Early Cory Red Cob. This variety is the favorite for first early, and no other variety has proved earlier.

White Cob Cory. This is an improvement over the Early Cory, as the cob is white, which gives it a finer appearance. It is as early as the Early Cory and of excellent quality.

Chicago Market or Ballard. This is the largest and best early corn in existence, twelve rowed, white cobbled and of exceedingly fine quality.

Premo Sweet Corn. A "sixty-day" sweet corn, and is thus described by the originators: "It not only combines all the merits of the leading early varieties, but it is also really superior to them all in size, quality and yield. Premo can be planted fully as early as the Adams for the young plants withstand slight frosts."

Extra Early Adams. This is an extra early field variety, but is much used as an early market variety, being sweet and juicy.

Early Minnesota. One of the standard early sorts. Ready for market two weeks later than Cory or Chicago Market.

Perry's Hybrid. An early variety of splendid quality. Kernels tinged with pink when ripe, with white cob.

New Champion. This corn is unsurpassed for market use, owing to its large size and fine appearance. It is medium early.

Golden Bantam. A very early sweet corn with golden yellow grain, very tender and of excellent quality.

Stowell's Evergreen. A standard variety for main crop; well known and popular.

Moore's Early Concord. A well known, early variety of large size, twelve rowed and of excellent quality. This makes a fine market corn.

Kendall's Early Giant. A valuable early sweet corn.

Crosby's Early. An early corn of large size and choice quality. It has long been a standard variety.

Metropolitan. A new early sort, only a few days later than Cory.

Country Gentleman. There is no sweet corn that compares with the Country Gentleman for sweetness.

Black Mexican. This corn, when in condition for the table, cooks remarkably white; but the ripe grain is black or bluish-black.

Old Colony. This variety is two weeks earlier than the Evergreen, and almost as large.

Early Evergreen. The ears of this new corn grow 8 inches long, are mostly 14 to 18 rows.

Zigzag Evergreen. This fine new strain possesses distinct characteristics.

Mammoth Sugar. A large late variety having ears of mammoth size, 14 to 20 rows.

LEONARD'S NARROW GRAIN EVERGREEN

A new type of Evergreen bred up by S. F. Leonard after years of selecting. It is as large as Stowell's, more uniform in shape of ear, has longer, narrower grains, more sugar and less starch. The best corn for canning or marketing.

CUCUMBER

Not before corn planting time plant cucumbers out of doors in drills or hills one-half inch deep. The crop may be advanced two weeks by starting in the hot bed or greenhouse on inverted four-inch sods covered with leaf mold. The plant will appear in four to eleven days and in three weeks from seeding, when the plant has two to four leaves it is ready to transplant outside.

Mark the field up and down hill, then furrow across its face in a four-foot check and at each intersection drop manure or fertilizer or, better, both. Throw earth to this intersection to form an elongated hill four inches high. Plant the seed like a short drill, not haphazard; then later two strokes of the hoe cleans this short drill.

Be generous. Use a dozen seed to a hill, and after the striped beetle has his toll, thin to three plants to a hill. To check the beetle, use on foliage, but not too heavily, road dust, ashes, soot, air slaked lime, bone flour, tobacco dust, or arsenate of lead; pull earth about the stem or cover the hill with netting.

Cultivate as long as possible. Cut the cucumbers. Do not pull or bruise them and to keep the plants bearing, cucumbers must not be permitted to ripen.

Chicago or Westerfield Pickling. A variety esteemed above all others by Chicago market gardeners, and extensively grown for the large pickling establishments in this vicinity. Fruit medium length, pointed at each end, with large and prominent spines. Color a deep green. It combines all the good qualities of an early cucumber.

Green Prolific or Boston Pickling. A favorite with pickle growers and commercial gardeners, and good for table use. Quite productive. Fruit small, uniform in size.

Early Cluster. Vines vigorous, producing the bulk of the crop near the root and in clusters. Fruit short, uniformly thick end, dark green, but paler at blossom end. A very productive sort.

Early Frame or Short Green. An excellent sort both for table use and for pickling. Fruit straight, handsome, smaller at each end, bright green; flesh tender and crisp, and makes fine pickles.

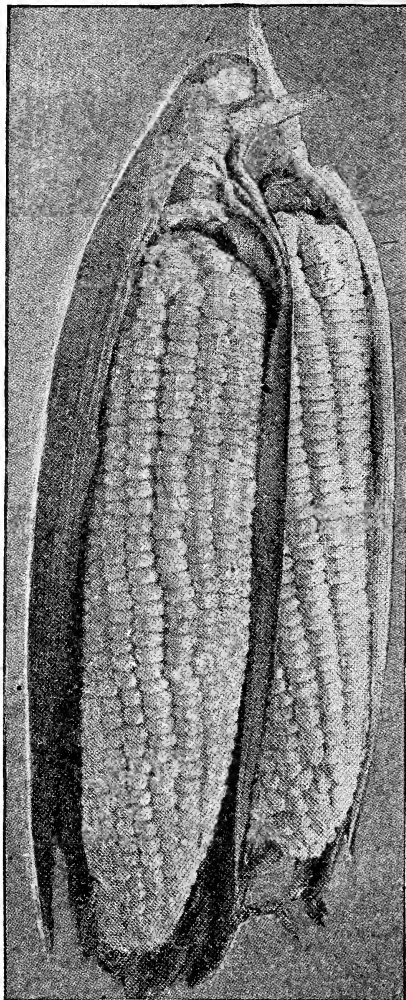
Nichol's Medium Green. A valuable and handsome variety, in shape between White Spine and Long Green. An excellent sort for pickles and useful for forcing. Very prolific. Fruit straight and smooth; color dark green, flesh tender and crisp.

Davis Perfect. In color, a dark, glossy green; shape, slim and symmetrical, with an average length of ten to twelve inches. They hold their color until nearly ripe, when they turn white.

Improved Long Green. Not so abundant a bearer as the preceding sorts, though recommended to all who put up their own pickles. Fruit long and slim, not surpassed in quality by any variety.

Evergreen White Spine. Is the most profitable cucumber for the market gardener. Best for the greenhouse, hot bed or for outdoor culture.

Early White Spine. One of the best sorts for table use. Vines are vigorous, fruiting early and abundantly; fruit uniformly straight and handsome, dark green, with a few white spines; flesh tender and of excellent flavor.



STOWELL'S EVERGREEN



CORN SALAD

CORN SALAD

Fetticus, or Lamb's Lettuce. This small salad is used during the winter and spring months as a substitute for lettuce, and is also cooked and used like spinach. In warm weather the plants will mature in four to six weeks. Sow the seed in shallow drills about one foot apart. If the soil is dry it should be firmly pressed over the seed in order to secure prompt germination. On the approach of severe cold weather, cover with straw or coarse litter. Like most salad plants, greatly improved if sown on very rich soil; indeed, the ground can scarcely be made too rich for them.

CRESS

True Water Cress can be easily grown by sowing the seed broadcast on garden soil and keeping the soil very wet till the plants are big enough to transplant to shallow indentations about five inches deep here and there along the sides of a clean flowing stream. There it will continue to spread by the lengthening of its roots, also by reseeding and requires no further care. The crop can be grown to maturity in wet garden soil, or the seed can be sown directly to the mud along the stream, but with lesser measures of success. April or September is a good time to plant these minute seeds, and this aquatic prefers to stand with its roots and most of its stems submerged. Cutting can begin in about sixty days, and a little later frequent cutting, using a sharp knife, will stimulate plant growth.

Curled or Pepper Grass, a pungent, quick-growing plant that poorly parodies the water cress flavor, can be grown in any garden soil as soon as the ground can be worked. Plant one-half inch deep in one foot rows, thinning the plants to four inches.

COLLARDS

Georgia, Southern or Creole. A variety of cabbage known in different sections as "Cofe," "Colewort," or simply "greens." It is extensively used in the south, where it continues in luxuriant growth all winter.



TRUE WATER CRESS

CHERVIL

A hardy annual, worthy of more general use for flavoring and garnishing.

Sow in early spring in rich, well prepared soil, and when plants are well established transplant to about one foot apart.

Curled. Greatly superior to the old, plain variety, being earlier, more handsome, and having fully as fine perfume and flavor.

CHICORY

(FRENCH ENDIVE)

Witloof Chicory. The principal merit of this variety consists in the width of its leaves and the large size of their ribs. When blanched, it forms the vegetable which the Belgians call Witloof. When properly grown and blanched it resembles a head of Cos Lettuce.

Large-rooted, or Coffee. Our stock is the improved type, with very much larger, smoother, whiter and proportionately shorter roots than the old kind. The dried and prepared roots are used quite extensively as a substitute or adulterant for coffee.

CARDOON

(CARDO)

Smooth Solid Cardoon. Grown from the mild ribs of the leaves which are blanched and used in the same manner as celery. The main root is also used and when cooked in a proper way, is excellent. Thorough blanching is necessary in order to bring out the delicacy of flavor possessed by the Cardoon.

DANDELION

Cultivated or French Common. This is considered the best by many and is not at all the same as our wild dandelion, being greatly improved by careful selection.

Improved Thick Leaved. One of the earliest and best greens in cultivation.

EGG PLANT

Treat the egg plant like a tender tomato that required even a longer period to mature. After cabbage plants are out of the hot-bed or greenhouse, which is April north of the Ohio, sow egg plant, keeping even the night temperature above seventy degrees. One ounce of seed gives two thousand plants, and one pound plants an acre. Transplant later to pots or to a three or four inch stand, and when corn is shoe high, put egg plant outside on rich well drained land. Set the plants two feet apart in four feet rows, shading or watering the plants if it's sunny or dry. Use any good stomach poison for the potato bug, when he attacks the egg plant.

Improved New York Purple Spineless. Very large and smooth, fine dark color. Ours is the spineless plant, most preferred by our market gardeners, both east and west.

Black Pekin. A fine variety, bearing large, round, deep, purple fruits, fine grained, and of superior quality.

Early Long Purple. Early, hardy and productive; excellent for the table.



EGG PLANT

WITLOOF
CHICORY

ENDIVE

Endive, or winter lettuce, used as a salad, as greens or garnishing, is usually planted one-fourth inch deep in a seed bed in mid-summer, and when convenient after a month transplanted to stand one foot apart in eighteen inch rows. When almost grown and about two weeks before ready to use, it is blanched by tying the leaves together with soft cord, or the blanching is by turning a flower pot or tile over each plant, or by blanching with earth, like celery. The blanching removes the green plant's acrid taste. The plant may be, but seldom is, used as an early spring crop. Three to five pounds of seed plants an acre.

Green Curled. Beautifully curled, tender and crisp.

Moss Curled. More finely curled, and a heavier and more dense plant than Green Curled.

White Curled. Very tender when cut young; blanches readily.

Broad-Leaved Batavian. (Escarrole.) This variety is chiefly used in soups and stews; requires to be tied up in blanching.

AROMATIC, MEDICINAL AND POT HERBS

Most of the varieties thrive best on rich sandy soil, which should be carefully prepared and well cultivated, as the young plants are for the most part delicate and easily choked out by weeds. Sow as early as the ground can be made ready, in drills sixteen to eighteen inches apart, taking pains that the soil is fine and pressed firmly over the seed; or they may be planted as a second crop, the seeds sown in beds in April, and the plants set out in June. Most of them should be cut when in bloom, wilted in the sun and thoroughly dried in the shade.

Annis
Caraway
Coriander

Horehound
Sweet Marjoram

Dill
Sage—Broad Leaf.....

Saffron
Savory, Summer.....
Thyme

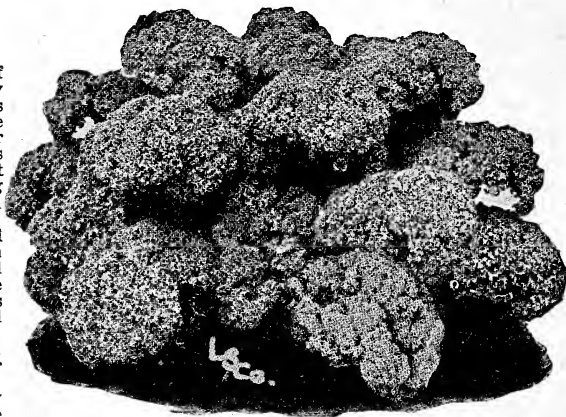
KALE OR BORECOLE

In Virginia, kale planted in late August has some of its plants thinned out and sent to market within sixty days and the cutting then continues until the field is clean in April. Further north, kale is treated like the cabbage; that is, planted early in spring in hot beds or out of doors, and it is used in the fall when light frosts have improved it. Kale is sown in two to three foot drills and thinned to six to twenty-four inches, according to varieties. One ounce sows generously one hundred yards and four pounds plants an acre.

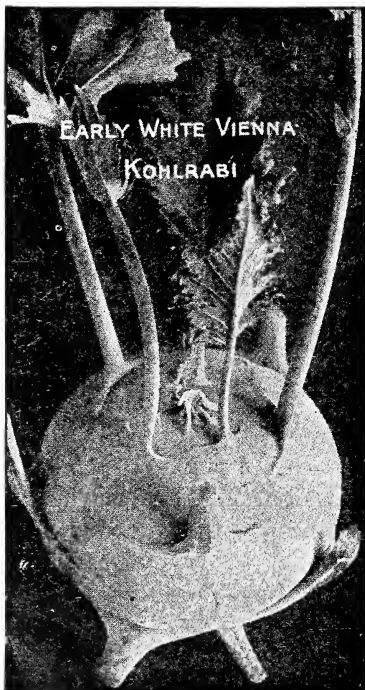
Siberian Kale, or Winter Sprouts. This is also called German Greens and is sometimes sold for Dwarf Green Curled Kale, but it is not as curly as the Dwarf Curled Kale and is different from it in color. The leaves are smooth in the center, having a fringed edge. Color has a bluish tint, not the deep green of the Dwarf Curled Kale.

Dwarf Green Moss Curled. Leaves yellowish green, very compact and beautifully curled; sow in September for winter and early spring use.

Dwarf Curled Scotch. Leaves bright green, curled, very tender and fine flavored; an excellent sort for private gardens.



DWARF CURLED SCOTCH KALE



KOHL-RABI

This relative of the cabbage, that looks like a turnip that grew above the ground, can be treated very much as either cabbage or turnips. One ounce sows one hundred yards and four pounds plants the acre. Sow in eighteen to twenty-four inch rows, thin to four inches apart and use for the table when small. Like the turnip, we cannot expect good kohlrabi in the summer heat, but a planting made about August first north of the Ohio will give a crop for winter storage. Do not overlook the value of this plant as a stock food.

Earliest Erfurt. A white tender variety, with a smooth root and very short top; the best variety for outdoor culture.

Early Short Leaved White Vienna. The finest for market. Flesh white and tender.

Early Purple Vienna. Bluish purple; similar to the above, except in color.

Large Green. Hardy, quite late, and used for feeding stock. Bulbs large, weighing 8 to 10 pounds, whitish green in color; leaves large and numerous.

LEEK

This mild member of the onion family is used in soups and salads. Sow one ounce to one hundred feet of row or four or five pounds to the acre one-half inch deep, as early as the soil can be worked in spring. Thin the plants to a stand of four to six inches in the twelve to eighteen inch rows. It is advisable to throw earth to the plant to blanch it, very much as celery is blanched.

Large American Flag. Large, hardy and of excellent quality.

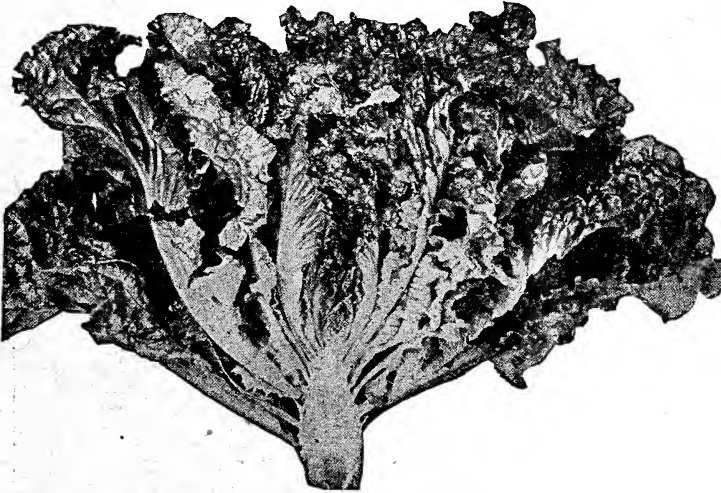
Giant Carentan. The favorite market variety, large, thick stem, of mild flavor and attractive appearance.

Musselburgh. Grows to a very large size, with broad leaves, spreading like a fan; hardy, of excellent quality.

London Flag. An old and popular sort; one of the hardiest and best for winter use.

LETTUCE

As lettuce will stand considerable freezing, it may be seeded or transplanted out-of-doors as soon as the soil can be worked in spring. For a succession, replant every three weeks till within sixty days of freezing weather. The soil cannot be made too rich and this crop must be grown quickly and unchecked to be of superior quality. North of the Ohio lettuce is frequently started under glass like cabbage in hot beds; in February transplanted to cold frames and hardened to be set out-of-doors in early April. In more southern or milder winter climates, lettuce may be sown in autumn, protected with sash or coarse litter and in late winter transplanted; or thinned and matured where planted. When the crop is matured under glass it requires much ventilation and little heat, and beware of too much water in cloudy weather. In the summer's heat canvas or a slatted half shade and plenty of water is of value. One ounce of seed gives two thousand plants and three pounds plants an acre. In the seed bed drop twenty-five seed to the foot, and gently rake it in; failure may result from too deep a covering. Mature lettuce in twelve to eighteen inch rows, giving the loose leaf varieties three to eight inches in the row and head lettuce six to twelve inches.



BLACK SEEDED SIMPSON

Hanson. Heads large, hearts quickly and stands the summer well; quality excellent.

New York. The large white heads resemble cabbage in their pounds each. The quality is superb, being crisp, rich and tender. It withstands the heat well, making a fine variety for all seasons.

The Deacon. A magnificent butter head lettuce. It stands the hot weather without becoming bitter or running to seed, and bears fine, large heads of superb quality. Light green outside, and within a beautiful cream yellow of delicious rich, buttery flavor. Highly recommended for home or market use.

Early Tennis Ball, White Seed. A good early sort, and used largely by eastern gardeners for forcing.

Early Tennis Ball, Black Seed. A good lettuce for early use. The heads are small, but very crisp and solid.

California Cream Butter. A grand, good butter lettuce. The heads are of good size, round and solid; outside, medium green; within, the leaves are a rich cream yellow color. Rich and buttery in taste.

All Seasons. One of the best all head lettuces, standing the hot sun better than any other sort. Slow to seed.

May King. Plant this lettuce for the first early head lettuce.



BIG BOSTON

Black Seeded Simpson. This is the most popular early sort on the market. Forms large, loose heads. Leaves thin and exceedingly tender, of light green to golden yellow. Best sort for forcing or outdoor early planting.

Early Curled Simpson White Seed. Forms a close, compact mass of curly yellowish green leaves. Good for cold frames or early planting for outdoors.

Grand Rapids Forcing. Preferred by a great many to the Black Seeded Simpson, on account of being a tougher leaved lettuce. This makes it a fine sort for shipping, as it does not break so easily and stands longer without wilting.

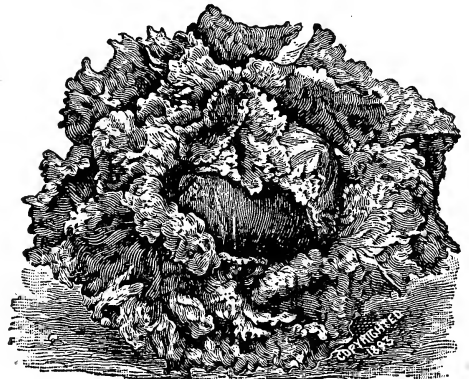
Paris White Cos. The Cos lettuce differs entirely in shape from the other varieties, the head being elongated and of conical form, eight or nine inches in height, and five or six inches in diameter. To be had in perfection it requires to be tied up to insure blanching.

Early Curled Silesia. A very tender sort, with fine curled leaves.

Boston Curled. Curled leaves of good quality, a popular variety among eastern growers.

Prize Head. The leaves are very large, crimped, bright green tinged with brownish-red and are exceedingly tender, crisp and sweet, forming a large, loose head.

solidity, and frequently weigh two and three



HANSON

It is equally good for outdoor planting or forcing. The outer leaves have a slightly brownish tinge, while the heart is a beautiful yellow, very crisp and tender.

Big Boston. This variety is identical in color, shape and general appearance with the famous Boston Market Lettuce, but is double the size. It is about one week later in maturing, but its solidity and greater size of head will make it a most valuable sort. A most desirable variety, either for forcing in cold frames or open ground planting.

St. Louis Head. The most popular and satisfactory head lettuce with market gardeners. It forms a fine head, is tender and crisp, and is very slow to run to seed. Outer leaves are light green, and the inner ones are bright, creamy yellow, of a very fine flavor. Altogether, we recommend it as being the best head lettuce for general use.

Hubbard Market. A large heading variety, good for either forcing or sowing in open ground.

MUSK MELON

Musk melon, water melon, cucumbers, gourds and squash are known as cucurbits. For musk melon follow our cultural directions for cucumber except that where a robust growing variety of musk melon is grown, a space of as much as six by six feet is sometimes required between hills. One ounce of seed plants fifty hills, and three pounds plants an acre. The crop or the last planting for a succession should be in by June, north of the Ohio. While not necessary, it is advisable to pinch off the branches of the musk melon if a quicker matured or a larger or a better fruit is required. Pick the melon when it parts from the stem without difficulty and store a few days in a cool room.



Rocky Ford. This has become one of the most popular of small or crate melons and is shipped in large quantities from Colorado and Arizona. The vines are vigorous and productive. The fruits are oval, slightly ribbed, densely covered with fine netting. Flesh green, very sweet and highly flavored.

Chicago Market. This we consider the best Nutmeg for earliness of maturity, large and uniform size, thickly netted skin, small seed cavity, deep green flesh, juicy delicious flavor and freedom from rot. A favorite with all who prefer a green flesh sort.

Jenny Lind. Vines rather small but vigorous and productive. Fruits small, somewhat flattened, deeply ribbed and well netted. Flesh green and exceedingly sweet.

Skillman's Netted. An excellent early melon with fine, tender flesh.

Netted Gem. The best early melon known. Shipped to every market of note in great quantities every year. Medium size, but of excellent flavor.

Early Hackensack. The fruits are nearly two weeks earlier than Hackensack, medium to large sized, nearly round or somewhat flattened, evenly and deeply ribbed and with very coarse netting. The skin is green, slightly tinged with yellow as the fruits mature. The flesh is green, a little coarse but juicy and sweet.

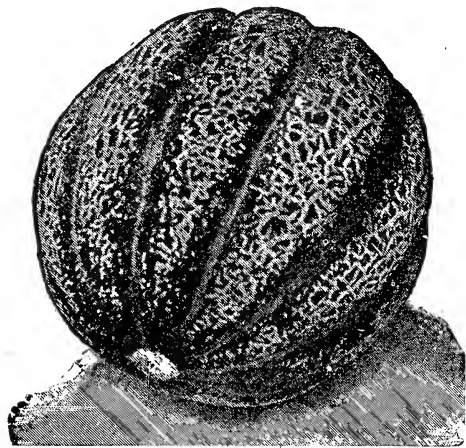
Hackensack, or Turk Cap. A very large, green fleshed melon. The vines are hardy, vigorous and productive. The fruits are nearly round, usually somewhat flattened; ribs large and of irregular width, densely covered with coarse netting.



EARLY HACKENSACK

Baltimore, or Acme. The fruits are medium sized, oval or long oval, slightly pointed at stem end, slightly ribbed, and are covered when ripe with coarse netting. The flesh is thick, green, well flavored and sweet. This variety is a very productive, sure cropper of good quality.

The Osage. Is of medium size, oval in form, dark green in color, somewhat netted and slightly ribbed. The flesh is extremely and uniformly thick, of firm texture, rich salmon in color; highly flavored and delicious to the mind. Cavity very small. It is a remarkable keeper and a good shipping melon.



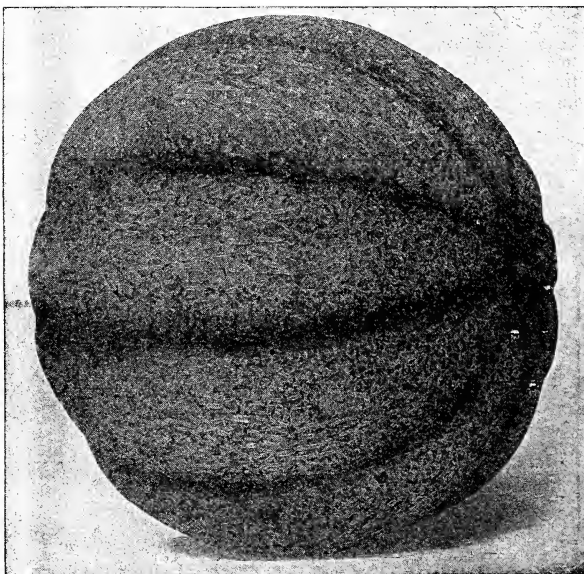
THE OSAGE MUSK MELON

Paul Rose. A yellow fleshed sort of suitable size for a crate melon and of excellent quality. Vines vigorous and productive. Fruits oval, slightly ribbed and densely netted.

Emerald Gem. A very early, yellow fleshed melon of small to medium size. One of the very best for the home garden.

Burrel Gem. This is an orange fleshed netted Gem or Rocky Ford.

Tip Top Musk Melon. The illustration shows a specimen of our strain of this popular melon. This very productive melon is of medium to large size, nearly round, slightly ribbed and fairly well covered with shallow netting. The flesh is deep yellow in color. The universal testimony of every one using Tip Top is that every fruit produced, whether big or little, early or late in the season, is a good one—sweet, juicy, finest flavor, firm, but not hard-fleshed, eatable to the very coating.



TIP TOP MUSK MELON

WATER MELON

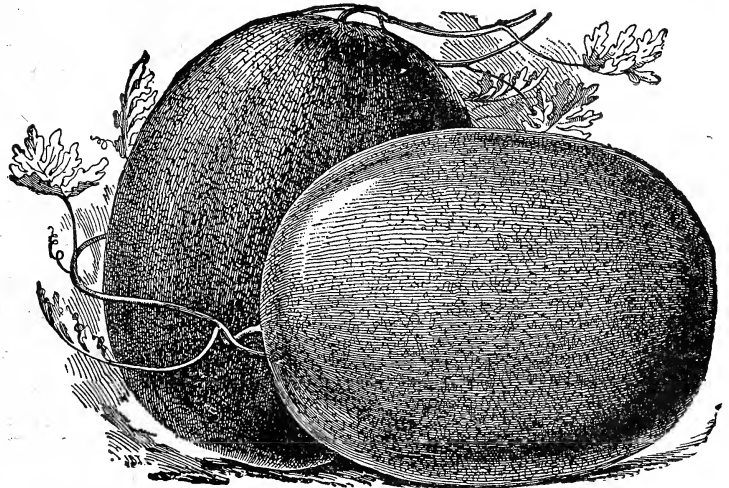
For water melon, follow our cultural directions for cucumbers, except that it is necessary to give the water melon a space of eight to ten feet between hills, and thin the plants to two to the hill. One ounce plants twenty-five hills and three pounds of seed plants an acre.

Sweetheart Water Melon. This melon is early, large, handsome, heavy and productive. The shape is oval and the color mottled light to a very light green. Flesh bright red, solid, but tender and very sweet.

Florida Favorite. A very large, long melon mottled dark green with stripes of lighter shade. Rind thin but firm; flesh very bright, deep red, very sweet, tender and excellent.

Cole's Early. Very hardy, a sure cropper and extremely delicate in texture of flesh, which is of dark red color; rind is thin and extremely brittle, hence not desirable for shipping purposes, but possessing all the other most desirable features. We highly recommend it for home use.

Kleckley Sweets. A splendid sort. Vine vigorous and productive. Fruit of medium size; oval, dark, mottled green in two shades, forming indistinct stripes.



SWEETHEART WATER MELON

Gypsy, or Georgia Rattlesnake. One of the largest varieties and stands shipment long distances. Fruit cylindrical, square at the ends, smooth, distinctly striped and mottled light and dark green. Flesh bright scarlet and very sweet.

Ice Cream. Medium sized with very sweet, scarlet flesh. A good variety for main crop.

Kolb's Gem. Vines of medium size, but remarkably vigorous and healthy.

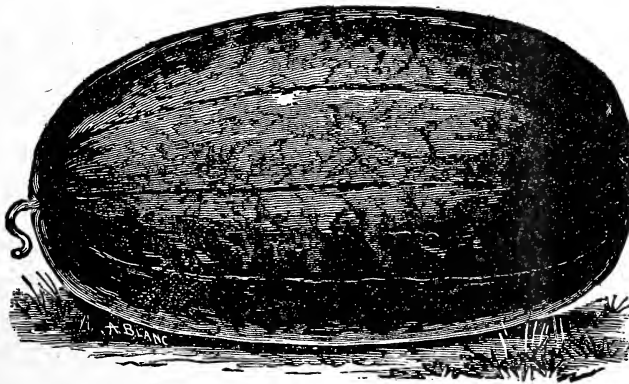
Tom Watson. Originated near Augusta, Ga., a few years ago; very prolific—six carloads on ten acres often made; shape long; color dark, deep green; no stripes.

Vick's Early, Peerless, Triumph, Dark Icing, Jumbo, Cuban Queen, McIver's Sugar, Dixie, Duke Jones, Red Seed Citron, Light Icing, Bradford, Phinney's Early, Green Seed Citron, Mountain Sweet, Halbert Honey, Success, Iceberg.

MUSHROOM SPAWN

For the money invested, no more profitable crop. Once started, it is easy to continue. The supply never equals the demand, so that a market is easily secured.

English. 1 lb. Bricks.



KLECKLEY SWEETS

MUSTARD

Mustard is grown for its seed, which is used for flavoring or medicinal purposes or grown for its leaf, which is used in salad or cooked like spinach. Sow mustard as soon as the soil can be worked in spring and every three weeks for a succession, or in the south it may be sown in the fall for early spring greens. Cover the seed lightly in twelve to eighteen inch drills. Cut the leaf when not over four inches high and expect this cutting in fifty days from the seeding.

Giant Southern Curled. The favorite of the south.

Fordhook Fancy, or Ostrich Plume. Same as above.

Chinese or Large Leaved Mustard. The large leaves which often measure 14 inches, are ready for use in about six weeks after sowing. Plants will continue to yield until frosty weather. Leaves are eaten boiled, like spinach.

Bloomsdale, Large Leaved. Same as the Chinese Mustard described above.

White. Best for general use.

Brown. Stronger than above.

NASTURTIUM

Tall Mixed Garden. Grown not only for ornament but the beautiful orange colored flowers and foliage are used for garnishing and the young leaves or shoots are excellent for salads. The green seed pods are greatly esteemed by many for use in mixed pickles.

Dwarf Mixed Garden. Same as above, except that it grows in dwarf form.



CHINESE MUSTARD

SPECIAL GLOBE ONIONS



RED GLOBE

WHITE GLOBE

YELLOW GLOBE

Our three Globes bring more money to the onion grower and sell quicker than any other varieties. Our Yellow Globe is the Standard Yellow, our Red Globe is the Standard Red, and our White Globe is the Standard White.

These stocks are quite superior to the ordinary run of Southport Globes.

Red Globe. A fine large globe-shaped onion, of mild flavor. It is a good keeper, excellent for main crop.

White Globe. A very handsome onion, of splendid quality. Keeps well. It has a good, strong flavor. The best sort for early green onions from seed.

Yellow Globe. This is a large, handsome yellow variety. Shape, perfectly globular; quality fine. A splendid keeper.

ONION SEED—Standard Sorts

Study the demands of your market to know what onion that market requires.

As soon as the soil can be worked in spring, and not after May 1st, sow onion seed in twelve to fifteen inch rows, leaving out every tenth row as a weed alley if preferred. One ounce of seed plants one hundred fifty feet and five to six pounds plants the acre. The black slow germinating seed should be covered firmly one-fourth inch deep. Quantities of manure had best be applied in the year before the planting, and much commercial fertilizer, high in potash, harrowed in immediately before seeding.

Begin cultivation as soon as the plant can be seen; cultivate frequently and when convenient thin to a stand of two to four inches.

In the so-called new onion culture the onions are started in hot beds and easily transplanted when the size of slate pencils to the required stand in the field.

Large Red Wethersfield. We have a very fine and select strain of this sort. Color is deep purplish red, flesh white, moderately grained and very firm. Yields an enormous amount per acre, and is one of the best winter keeping onions.

Extra Early Flat Red. This variety matures from ten days to two weeks earlier than the Red Wethersfield. The color is a deep rich red, fine grain and close.

Australian Brown Onion. Is of medium size, wonderfully hard and solid and most attractive for market, both as to form and appearance. The color of the skin is a clear amber brown.

Southport Yellow Globe. A large, perfectly shaped Globe onion and an excellent onion for keeping throughout the winter. A very heavy cropper, handsome in appearance and a good dark yellow color.

Yellow Globe Danvers. This fine onion is of large size. An early and abundant cropper. Bulbs very thick, flat or slightly convex bottoms, full oval top with small neck and rich brownish yellow skin.

Michigan Yellow Globe. The bulbs are large and uniformly spherical with very small necks and the largest diameter below the center of the bulbs of a rich orange color.

Ohio Yellow Globe. An early Globe onion, small neck and very uniform in size and color. Very popular in the marsh onion sections of Ohio and Indiana.

Southport Red Globe. This is a fine keeper. Large size and considered one of the best red onions. Flesh is fine grained, very mild and tender.

Philadelphia Silver Skin. Very desirable for family use. Flavor mild and pleasant.

White Portugal. American Silver Skin. This is the best sort to sow for onion sets or for pickling. When sown thickly for either it makes a small, round hard bulb.

Southport White Globe. This grows to a very large size and is a perfectly globe-shaped onion. Color is a clear pure white. This variety is used by market gardeners for bunching.

Prizetaker. Grows to an immense size and for fall marketing is unexcelled. Although of such great size, it is very hardy and a fair Winter keeper, as it ripens up hard and firm; very fine grained, and of mild, delicate flavor. The outside skin is rich yellow while the flesh is white. To get the best results from this onion the seed is sown in beds and transplanted. It will, however, make a good crop if sown in the ordinary way.

Early Flat Yellow Danvers. A good variety, but not as round or quite as early as the Yellow Globe Danvers.

Yellow Strasburg, or Dutch. One of the oldest varieties. Bulbs quite flat, of good size.

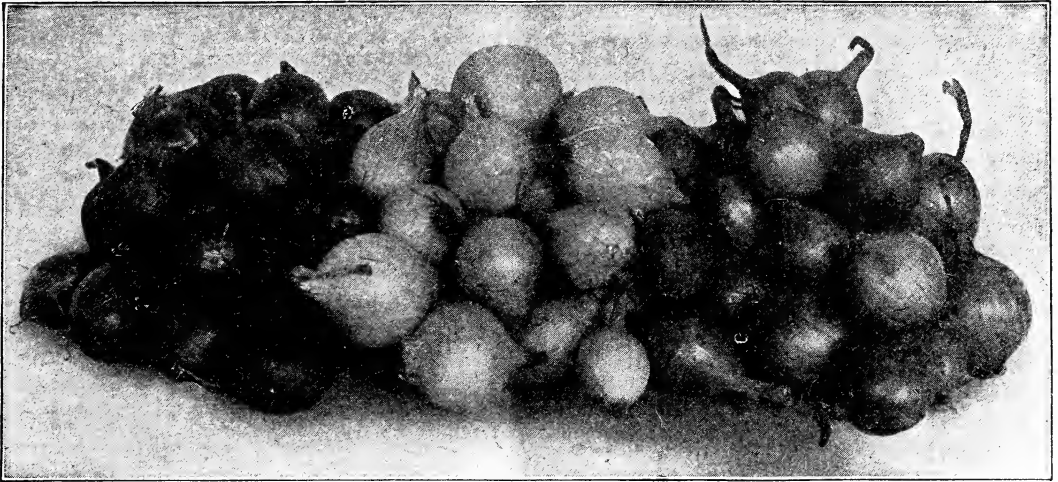
New White Queen is a fine early silver skinned variety, of beautiful form and rapid growth, and possessing fine keeping qualities.

Bermuda Red. A very early, pale red onion, grown extensively in the Bermudas and southern part of the United States for early shipping to northern markets.

Bermuda White. Mild flavored; yellowish in color; otherwise same as red.

Crystal White Wax. This variety is popular in the south where the transplanting method of culture is practiced.

ONION SETS



RED

WHITE

YELLOW

Onion Sets. Should be planted as early in the spring as convenient, to obtain early green onions, but they may be set at any time up to June 1st. Set in rows a foot apart and three to four inches between them in the row. Any good soil will suit them. When grown in quantity, high cultivation is given in order to forward the crop for an early market. They are ready for use as soon as the bulbs begin to be of fair size. Those not used in green condition will ripen early in July and make nice Onions. Potato and top onions are grown from bulbs only, growing in clusters. These clusters are separated and the smaller ones kept for seed. There is no crop which pays better than the first load or so of green onions in the market. Onion Sets will make this crop for you. Why not grasp the opportunity offered. Our Sets are carefully grown and choice; they will give the largest returns for the money invested if the product is sold, or excellent green onions for home use at a time when a fresh green vegetable is needed.

The varieties of Onion Sets are:

Red Bottom Sets
Winter Top Sets
Yellow Multipliers

White Bottom Sets
Potato Onions
Yellow Bottom Sets

White Multipliers
Genuine Top Sets
Shallots

OKRA OR GUMBO

The pods of this plant are used in a great number of ways throughout the Southern States, and the plant should be more frequently grown in the north. Plant at corn planting time in rich land, sowing the seed thickly in two or three foot drills, and thinning to an eight to twelve inch stand, according to varieties. A generous planting is two ounces to one hundred feet and ten pounds to the acre. Okra seed may be planted six seed to the hill, two to three feet apart and thinned to two plants to the hill.

Dwarf Prolific or Density. A fine new variety, much dwarfer than the ordinary dwarf okra, and much more productive. Short, thick pods.

White Velvet Okra. The pods are perfectly round, smooth and of an attractive white velvet appearance; of superior flavor and tenderness.

Tall Green. A favorite at the south; called also Perkins Mammoth Long Pod.



OKRA

PARSNIP

Plant one-year-old parsnip seed as early as the soil can be worked in spring and do not cover this slow germinating seed deeper than one-fourth inch. Use eighteen to twenty-four inch rows, thinning the plants to a four inch stand. One-half ounce of seed sows one hundred feet and three to five pounds plants an acre. This crop requires the entire season to mature, and as frost improves the roots, they may be left in the ground all winter. Both as to quantities and its feeding values, the parsnip is a valuable stock feed.

Hollow Crown. Roots comparatively short, with a very smooth, clean skin. The variety is easily distinguished by the leaves arising from a depression on the top or crown of the root.

Guernsey. The best sort for heavy, black soils. Where the soil is exceedingly rich this is the variety needed, as it makes a fine shaped root which does not grow too long.



CHAMPION MOSS CURLED

PARSLEY

Parsley used for garnishing and for seasoning can be planted as soon as the soil can be worked in spring. Cover the slow germinating seed one-fourth inch deep in twelve to eighteen inch rows, later thinning to a six inch stand. One-fourth ounce sows one hundred feet and three to five pounds plants an acre.

Double Curled. The standard sort for outdoor culture, also highly prized by market gardeners for the greenhouse.

Champion Moss Curled. A very fine curled variety. One of the handsomest for garnishing purposes. The exceedingly curled leaves make it desirable.

Fern Leaved. This sort has a peculiar, fern shaped leaf. It is not so desirable as the more curled sorts.

Hamburg Rooted. The standard rooted sort. The leaves are used for soup, greens, and the roots, when sliced, are much esteemed.

PEAS

As to a superiority between smooth and wrinkled peas it is all a matter of individual taste, but the preponderance of taste is in favor of the wrinkled varieties.

ALL VARIETIES OF PEAS, REGARDLESS OF HEIGHT, MAY BE GROWN SUCCESSFULLY WITHOUT A TRELLIS OR SUPPORT. As peas vary in height from six inches to six feet, it follows that the distances in the row and apart in the row should vary. Dwarf or half dwarf varieties are best planted in double or companion rows six inches apart to support and shade each other in their growth; then leave a space of eighteen to thirty inches, according to height of the variety, and repeat the double row. The tall varieties that may be given support are planted in single rows, the space between the rows somewhat less than the height of the variety. Drop ten to twenty dwarf peas to the double row or six to ten tall peas to the foot of row, using one quart to one hundred feet and three bushels to the acre.

Plant all peas at least five inches deep in soil that has been deeply plowed. This deep planting is the grower's attempt to give the peas the cool, damp climate they prefer. Lightly harrow or rake the soil when the peas should be breaking through, and continue to cultivate till the vine stops the work.

All peas stand some frost and may be planted as soon as the soil may be worked in spring. Peas should be planted frequently for a succession all north of the Ohio. The early varieties are planted in August for a late autumn crop.

For quality's sake, pick peas before they crowd the pod and pick all pods as rapidly as produced to somewhat extend the plants' bearing.

As all varieties of peas lose their characteristics when left without that selection given by expert seedsmen, it is necessary to go to a reliable source for seed peas.

Alaska. Well known and extensively used, especially by Cannners. Very early, and when carefully grown, uniform in ripening. Vine is strong and vigorous, 2 to 2½ feet high, of a peculiar light green color; pods 2¼ to 2½ inches long, straight and blunt at the end, and light in color.

First and Best. Early, productive and hardy, with a strong, vigorous vine, which is light in color and uniform in growth, 2½ to 3 feet in height and bearing straight pods 2½ to 2¾ inches long, round, light in color, and blunt at the ends.

American Wonder. Vigorous, productive vines, with a luxuriant foliage, and producing the leaves on one side of the stalk, and growing from 9 to 12 inches high. On account of its dwarf habit of growth it is very desirable for private garden use. Pods are light colored, straight, round, about 2½ inches long, and blunt at the end.

Nott's Excelsior. Resembling Gems in habit, but more dwarf and uniform in growth; height, 12 to 17 inches, with rather light foliage.

William Hurst. Resembling American Wonder in habit, but more straggling and uneven in growth. Height, 16 to 18 inches, foliage dark. Vigorous and productive, bearing in profusion, long, curved pods, medium green in color, about 3 inches in length.

Gems. Strong and vigorous in growth, producing vines from 18 to 24 inches in height, dark foliage, bearing pods singly on both sides of the stalk, beginning near the ground. Pods are almost straight, 2½ to 2¾ inches long, light in color and blunt at the ends.

Advancer. Vines upright and vigorous in growth, hardy and productive. Height, 30 inches, foliage dark green. Pods 2½ to 2¾ inches long, round, dark colored and blunt.

Sutton's Excelsior. Similar in habit of growth to Nott's Excelsior, but bearing very large, broad pods, well filled with large peas. Very tender, and of the most delicious flavor. Vines about 18 to 20 inches high, medium light in color with pods 3¼ to 3½ inches long, light in color and blunt at the ends.

Sutton's Dwarf Defiance. The vines, vigorous and hardy, about 2 feet in height, with coarse, dark green foliage, bearing long, broad pointed pods, dark green in color. Fit for picking 61 days from planting. Seed large, green, wrinkled.

Abundance. Vigorous in growth and productive, bearing pods in great abundance, although of medium size and of excellent quality. Very similar in every respect to Horsford's Market Garden, except that it is a few days later, being fit for picking 71 days from planting. Pods are dark green and blunt. Seed green, wrinkled and medium in size.

Telephone. Vines and leaves large and coarse. Foliage light green in color. Height, 40 to 50 inches, pods, 4½ inches long, broad pointed, medium green in color. Fit to pick 62 to 65 days from planting. Seed large, green, wrinkled.

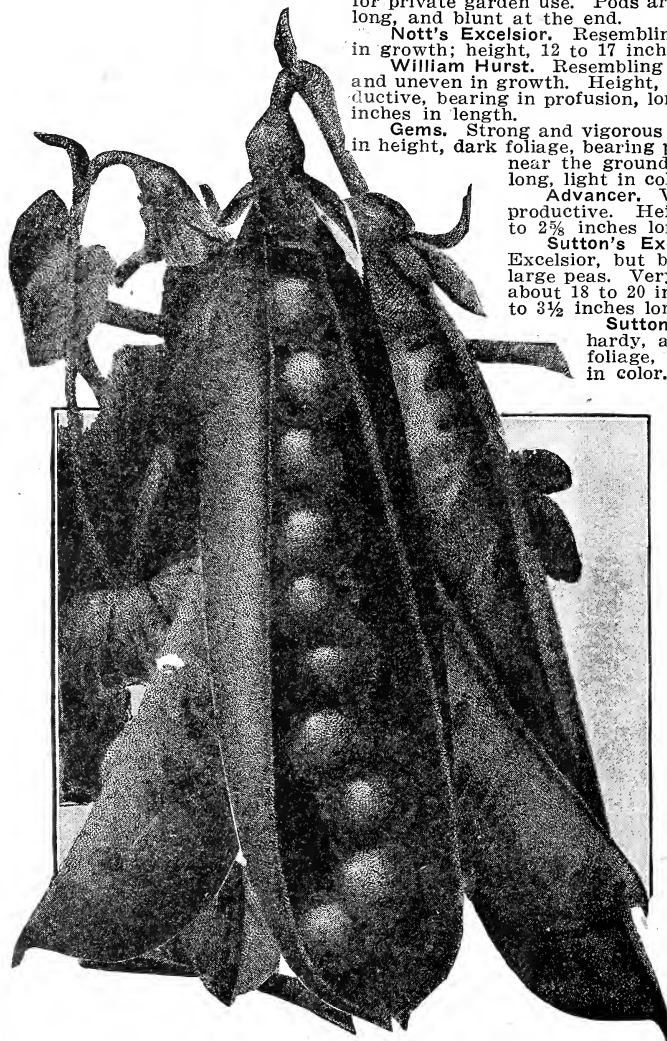
Everbearing. Vigorous and branching in habit of growth. Height, 2½ to 3 feet. Pods, 2½ to 3 inches long. Broad, light colored and blunt. Fit to pick 70 days from planting. Seed green, wrinkled, large in size.

Horsford's Market Garden. Strongly resembling Premium Gem in habit of growth, but about one-third taller, vines growing 26 to 30 inches high.

Early May Improved. This pea is one of the best of the "White", earlies and is superior to First and Best or Prolific Early Market. Vines are strong growing for this class of pea, about 30 inches in height, foliage pale green. Pods are pale colored, straight, round and blunt. Average 2¼ inches in length. Fit for use 56 days from planting. Seed small to medium sized, white and smooth.

Dwarf Telephone. Vines 18 to 20 inches high, with rather coarse foliage, medium light green, bearing pods, broad, straight and about 4 inches long. Pale green in color and well filled with peas of excellent flavor. Ready for picking from 62 to 65 days from planting. Seed pale green, large, much wrinkled.

Stratagem. A vigorous, hardy and luxuriant vine, bearing large pods containing peas of excellent quality. A heavy cropper, although Fods 3½ inches long, straight, broad, pointed, Seed very large, green, wrinkled.



HORSFORD'S MARKET GARDEN

it has a tendency to sport. Vines 20 inches. Foliage, dark green. Pods 3½ inches long, straight, broad, pointed, gray green in color. Fit for table use 56 days from planting. Seed very large, green, wrinkled.

PEAS—Continued

Shropshire Hero. Strong, vigorous vines, 42 inches in height. Pods 3 to 3½ inches long, blunt, light green in color. Fit for table use, 68 to 73 days from planting. Seed large, green, wrinkled.

Yorkshire Hero. Hardy, productive, and upright in growth, bearing near the top of the stalk, broad pointed pods with peas of a good quality. Foliage dark green, 23 to 28 inches in height. Pods, 2½ to 3 inches long, blunt, light green in color.

Gradus. A large, wrinkled, early pea, with a pod nearly as large as Telephone, filled with large peas, tender and of good quality and flavor. Very quick to germinate and mature with the early sorts. This pea will not stand adverse conditions, however, as well as some of the other sorts, and seed must be planted after all danger of early frost has passed. Seed large, cream colored, wrinkled.

Thomas Laxton. Closely resembling Gradus in habit, rapidity of growth, earliness and foliage, 26 to 30 inches high, and much harder in every respect than Gradus.

Potlatch. Strong, vigorous vines, of even growth, 20 to 24 inches in height, with luxuriant dark foliage, bearing pods medium green in color, 3½ to 4 inches in length. Broad and pointed at the ends. No variety known will produce more pods, and no pods could possibly shell out better. The Potlatch is a variety from which anyone may expect great things. Fit for table use 61 days from planting. Seed green, wrinkled, large in size.

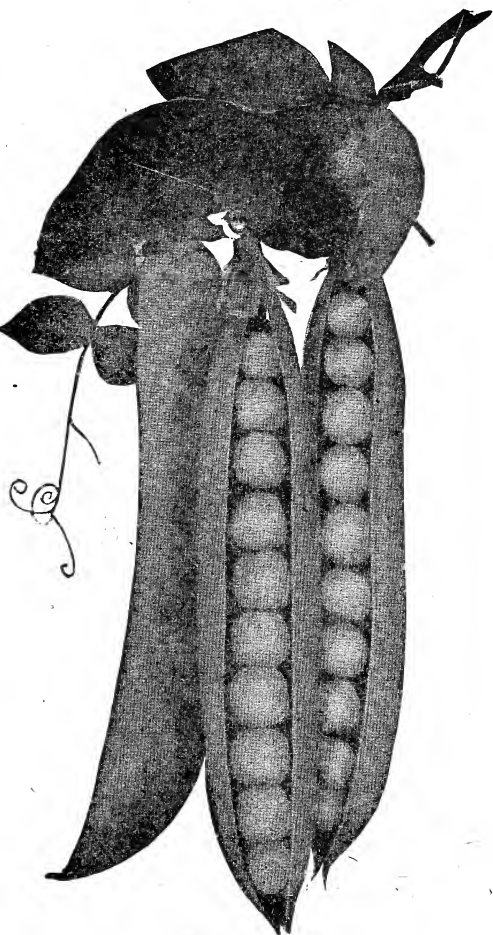
Duke of Albany. Resembling the Telephone in appearance. Vine and foliage medium green in color. Height, 50 inches.

Alderman. A large podded pea of the Telephone type, very robust and vigorous as to vine, foliage, mixed, medium green.

Champion of England. Strong and vigorous in growth, 42 to 50 inches in height.

White Marrowfat. Vines hardy, strong, vigorous and bearing broad, thick, leathery pods.

Black-Eyed Marrowfat. Strong and vigorous vines bearing pods near the top of the vine.



POTLATCH

PEPPERS

The pods of the pepper are used in sauces, salads, soups or as a seasoning, and the large mild varieties called mangoes are eaten from the hand or variously stuffed and prepared with cabbage, tomatoes or meat. The pods of peppers are green till in ripening they turn red or yellow, according to the variety.

Start pepper in hot-beds and in other ways treat like a tomato. Set out of doors after frosts in thirty-inch rows, giving each plant eighteen inches in the row. One ounce of seed give, according to the handling, from one to two thousand plants and one pound plants an acre.

Sweet Mountain. Plants very vigorous and productive, growing upright, with moderately large leaves. Fruit very large, long, often eight inches or more in length, by two in diameter.

Large Bell or Bull Nose. A very large sort of inverted bell shape, suitable for filling or for mixed pickle. Flesh thick, hard and less pungent than most other sorts.

Ruby King. An improved American sort, reaching the largest size, yet retaining the symmetrical shape of the smaller sorts.

Golden Upright. The fruits are large and of a beautiful rich

golden yellow, tinged with bluish red. The peppers are mild and as pleasant to the taste as Ruby King.

Red Cherry. Plant tall, bearing a profusion of bright, red, round fruit which is very pungent when ripe.

Chinese Giant Pepper. Without doubt one of the very best and largest Mango Peppers ever introduced. Its mammoth size, splendid shape, beautiful, rich, glossy-red flesh and mild flavor, all lead us to speak of it in words of commendation.

Golden Dawn. In shape it resembles the popular Bell or Bull Nose Pepper. It is of a most beautiful golden yellow color.

Red Chili. Used in the manufacture of pepper sauce.

Long Red Cayenne. A long, slim, pointed pod, and when ripe of a bright red color. Extremely strong and pungent.



BELL, OR BULL NOSE

PUMPKIN

The finer varieties of pumpkins are used for pies and the coarser ones for stock feeding. While the pumpkin may be grown very much as cucumbers are grown in a garden, they are more frequently planted in the field with corn, where several seed are dropped in each fourth hill. Planted alone, six to ten seeds are covered one inch deep in hills eight to ten feet apart and thinned to two to four plants to the hill. One ounce plants twenty-five hills and two to four pounds of seed generously plants an acre. As this crop requires as much time as corn to mature, the planting cannot be too long delayed.

Cheese or Kentucky Field. One of the best for table use, and very productive. Shape flat; flesh yellow, thick and tender.

Connecticut Field. The hardest of all pumpkins; cultivated mainly for stock-feeding, producing enormous crops.

Mammoth Potiron. The flesh and skins are of a bright golden yellow color. Flesh fine grained and of excellent quality. This enormous variety has been grown to weigh 200 pounds.

Winter Queen. This is an improvement of the old, well-liked sugar pumpkin. Its size is uniformly about nine to ten inches in diameter, color, a beautiful deep orange yellow, with a close netting, almost as russeted as a potato.

Small Sugar. This variety is very small, but of most excellent quality for pies.

Pie. Fruit of medium size, nearly round; skin light yellow, smooth and covered with a fine gray netting. Flesh light yellow, very thick, sweet and finely flavored. Makes very delicious pies.

RADISH

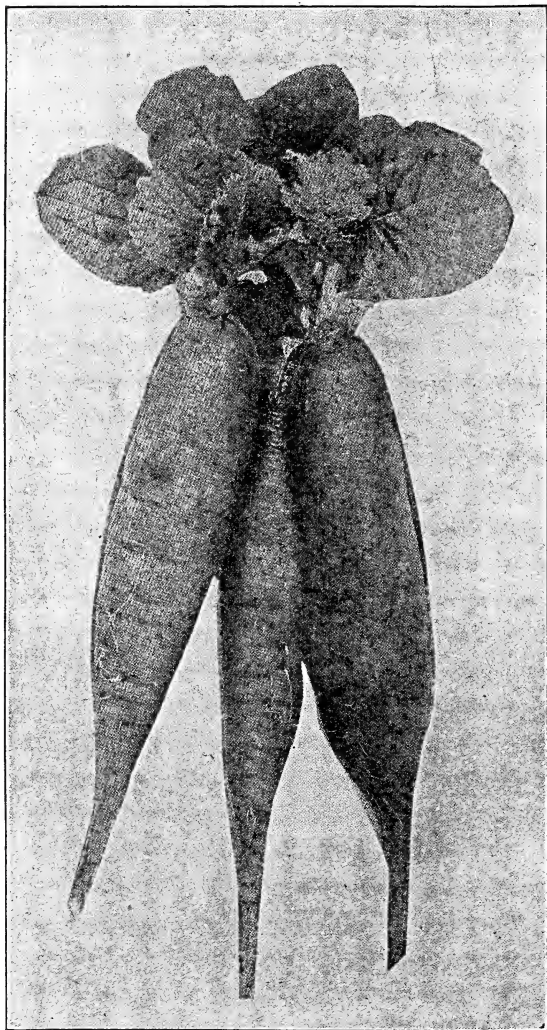
Plant radishes on a light soil if a choice is possible, and every second week for a succession from the time the soil can be worked in spring till the first light frost. Plant in ten to eighteen-inch rows, cover the seeds one-half inch deep and permit four to ten radishes to grow to the foot of row, according to variety. Use one ounce of seed to one hundred feet of row and eight to twelve pounds to the acre. Radish seed, which germinate quickly, may be sown with some slow-germinating seed that the cultivation of that crop may begin the earlier, or the quicker-growing radish may be grown between rows of some slow-growing crop that later requires considerable space.

The Winter Radish is sown at late turnip planting time and used in the autumn or stored for winter like the turnip.

Non Plus Ultra. This is one of the finest forcing radishes. The roots are round, with a deep scarlet colored skin. the flesh white, very crisp and tender.

Olive Shaped Bright Red Leafless Forcing. The extra early forcing radishes lately introduced are remarkable for the small size of their leaves. They develop their roots in so short a time that the latter are practically in advance of the leaves.

Rosy Gem. One of the very earliest in cultivation. Shape a perfect globe. Deep scarlet top, blending into pure white at bottom.



LONG SCARLET RADISH

ing very popular. It is similar to White Vienna, but is not so long, is earlier and has a shorter leaf. We recommend it as a profitable, early variety where a long white sort is desired.

Rose or Scarlet China. Roots cylindrical, or largest at the bottom, tapering abruptly to a small tap. Skin very smooth and of a bright rose color.

Round Black Spanish. Roots round, sometimes top-shaped, three or four inches in diameter; skin black, flesh white.

Long Black Spanish. One of the latest as well as hardest of the radishes; an excellent sort for winter use. **California Mammoth.** First introduced into this country by the Chinese in California. It is pure white. The flesh is tender and crisp, keeping well through the winter.

White China or Celestial. A comparatively new variety which is popular wherever known. The root is long, cylindrical, with beautiful white skin.

Large White Spanish. A large rooted winter variety.

Scarlet Turnip, White Tipped. One of the handsomest of the turnip radishes and a great favorite in many large markets, for early planting outdoors.

Early Scarlet Turnip. The standard early turnip radish. Fine flavored and mild.

Deep Scarlet Turnip. This is a very bright colored scarlet turnip radish, very early and short leaf, well adapted to forcing under glass.

White Summer Turnip. A very large turnip-shaped variety; white, very crisp and mild.

Long Brightest Scarlet, White Tipped. This is the brightest and handsomest colored scarlet radish known.

French Breakfast. Olive-shaped, scarlet, with white tip; crisp and tender. Very early. A general favorite.

Long White Vienna, or Lady Finger. A very excellent white variety with long, very smooth white roots.

Chartier. Decidedly distinct in appearance from any radish in cultivation.

Long Scarlet, Short Top Improved. This bright scarlet, small topped sort is about six inches long.

The Cincinnati Market. The tops of this new radish are very small and may stand much closer in rows than Wood's Early Frame or Long Scarlet, without danger of running to seed.

Crimson Giant Turnip, Forcing. A variety extraordinary in that, while growing to an unusually large size, it is always tender, crisp and of mild flavor. It remains in perfect condition a remarkably long time, and unlike other forcing varieties, does not become pithy even when twice their size in diameter.

Golden Globe. This variety is of quick growth, affording crisp and tender radishes even in the hottest climate and is extensively grown in the south.

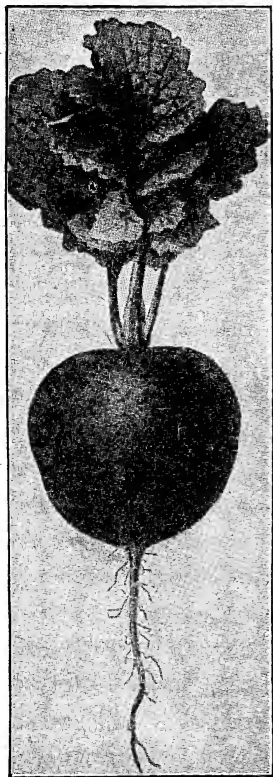
Wood's Early Frame. This is not only a good variety for forcing, being shorter and thicker than the old Long Scarlet Short Top, but is one of the very best sorts for first crop out of doors.

White Strasburg, or Summer Hospital. Large, showy, half long, white sort.

Giant Stuttgart. A summer variety. Grows to a large size. White flesh, very crisp and tender. Of good flavor and a good keeper.

Early Scarlet Globe. A desirable sort for hotbed forcing and outdoors; very early; flavor mild, crisp, juicy and tender; top small; will stand heat without becoming pithy. One of the best selling and most attractive radishes, on account of its bright scarlet color and handsome shape. Is ready in twenty-eight days.

White Icicle. This handsome white variety is becoming very popular. It is similar to White Vienna, but is not so long, is earlier and has a shorter leaf. We recommend it as a profitable, early variety where a long white sort is desired.



SCARLET GLOBE

RHUBARB

Rhubarb, familiarly known as Pie Plant, or Wine Plant, is cultivated in gardens for its leaf stalks, which are used for pies and tarts. Immense quantities are now annually sold in all the larger markets. No private garden should be without it.

Rhubarb succeeds best in deep, somewhat retentive soil. The richer its condition and the deeper it is stirred the better. Sow in drills an inch deep, and thin out the plants to six inches apart. In the fall transplant the young plants into very highly manured and deeply stirred soil, setting them four to six feet apart each way, and give a dressing of coarse manure every spring. The stalks should not be plucked until the second year, and the plant never allowed to exhaust itself by running to seed. Our seed is saved from selected plants of the Linnaeus, Victoria, Giant and other improved sorts, but like the seeds of fruit trees, rhubarb seed cannot be relied upon to reproduce the same varieties.

Rhubarb Seed.

Rhubarb Roots.

PRICES ON LARGE LOTS OF RHUBARB ROOTS ON APPLICATION.

SALSIFY

(VEGETABLE OYSTER)

The long, white tapering root of salsify resembles a small parsnip, and when cooked is a good substitute for oysters, having a very similar flavor.

It succeeds best in a light, well-enriched soil, which should be stirred to a good depth. Coarse and fresh manure should be avoided, as it will surely cause the roots to grow unevenly and ill-shaped. Sow early and quite deep, giving the general culture recommended for parsnip. The roots are perfectly hardy, and many remain out all winter, but should be dug early in spring, as they deteriorate rapidly, after growth commences. Store a quantity for winter use in a pit or cellar in damp earth or sand.

Large White. The common variety, roots medium sized, smooth; flesh white.

Mammoth Sandwich Island. This is in every way superior to the Large White, being larger, stronger growing and less liable to branch. Invaluable to market gardeners.

SPINACH

Spinach, a delicious green, resembling in growth a non-heading lettuce, is happily the best of tonics. As early as the soil can be worked, sow it one-half inch deep in fourteen-inch rows, using one ounce of seed to one hundred feet, and in the second week will appear a tiny plant with two very narrow leaves that do not resemble the true leaves that follow. Cutting should begin forty-five days from sowing. It is impossible to put spinach on too rich a soil, and nitrate of soda is used on it with profit.

South of the Ohio, spinach winters without protection. North it very often winter kills with good drainage and the best of straw covering.

All spinach quickly runs to seed in the heat of summer.

Victoria. An excellent sort, which forms a very large, exceedingly thick, dark green leaf, somewhat curled in the center. It becomes fit for use nearly as early as any, remaining so much longer than most kinds, and cannot fail to please, whether grown for the market or in the private garden.

Savoy Leaved. The earliest variety and one of the best to plant in autumn for early spring use. Plant of upright growth, with narrow, pointed leaves, which are curled like those of the Savoy cabbage. It grows quickly to a suitable size for use, but soon runs to seed.

Round Summer Broad Leaved. This variety is generally preferred in the North for early spring sowing, and is the favorite with our market gardeners. The leaves are large, thick and fleshy. Though not quite as hardy as the Prickly Winter, it stands the winter very well.

Improved Thick Leaved. A variety which grows very rapidly, forming a cluster of large, very thick, slightly wrinkled leaves of fine color and quality when cooked. Especially recommended for market gardeners.

Long Standing. An improved, round seeded strain of excellent merit, having all the good qualities of other sorts and continuing in condition for use much longer. The leaves are smooth and very dark, rich green. Very popular with market gardeners.

Prickly Winter. A very hardy variety and will withstand the severest weather with only a slight protection of leaves or straw. The seed is prickly, leaves triangular, oblong or arrow shaped. It is used for fall sowing, which in this latitude is about the first of September.

New Zealand. (*Tetragonia expansa*.) This branching plant, a spinach in its use and not in its growth, frost kills, but grows luxuriantly in the summer heat. Plant these large seeds three in a hill, three by two feet apart or start the plants under glass and transplant.

SORREL

Large Leaved French. Sow in drills as soon as the soil can be worked in spring and three to six inches apart in the row. Cutting begins in sixty days and continues for several years. Used as cooked "greens" or as a salad. Send the address of your friends who are interested in a good garden and they will receive a copy of this catalogue.

Prices of Seeds Vary. We quote Market Values upon request and always give our customers the benefit of the lowest price that the market condition will warrant. Special prices on a general list will be given upon application. LET US HEAR FROM YOU.



LARGE WHITE
SALSIFY



ROUND LEAVED SPINACH

SQUASH

The directions for the planting of cucumbers can be followed with slight modifications for squash or cymling. Plant the summer squash in hills four feet apart and use before mature. Plant the winter squash in hills six or eight feet apart; handle without bruising and store in a dry, moderately warm place for winter. Plant the seed generously and thin to two or three plants to a hill. One ounce of seed plants twenty-five hills and two to four pounds plants an acre. The squash is to be recommended either for the table or the feed lot.

Giant Crook-Neck. This strain is a great improvement on the old variety of Crook-Neck. It is larger and better in every way.

Straight-Neck Summer Squash. Market gardeners who ship early squash to distant markets know the difficulty of packing the crook necked variety in boxes to good advantage. In our straight-neck the bad feature of the crook has been overcome, and by continued selection the size has been increased more uniformly in shape and improved quality.

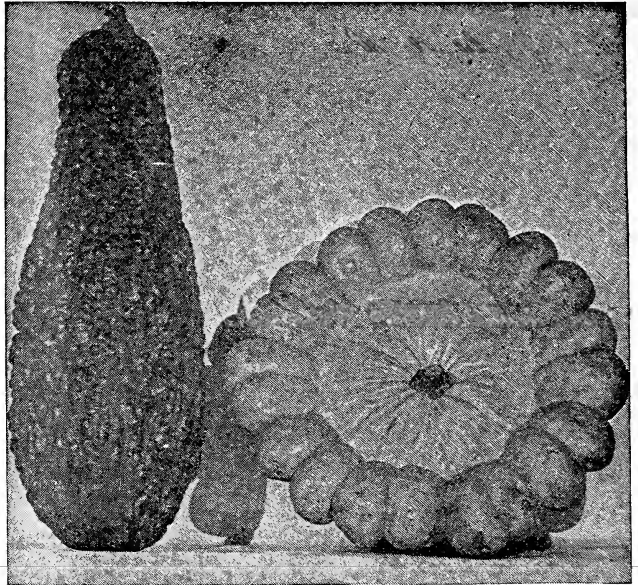
Golden Custard Bush. Exceeds in size any of the scalloped sorts.

Delicata. Early and very prolific; of oblong shape. Ground color orange yellow, splashed and striped with very dark green. Although of small size, the squashes are very solid and heavy, while the quality is rich and dry.

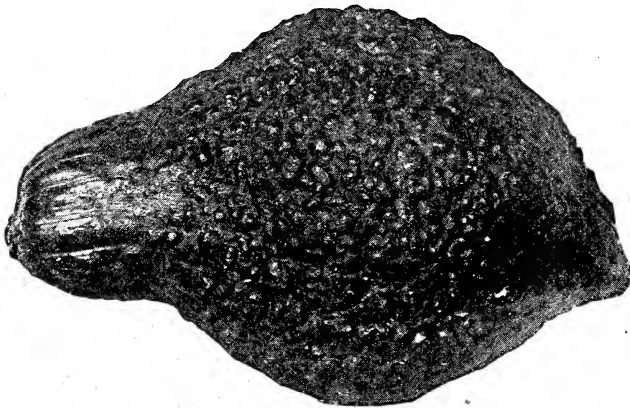
Early White Bush Scallop. Similar in form to the Golden Bush, but with a cream white skin, and more tender and delicate flesh.

Mammoth White Bush. This has been obtained by years of careful selection. Although we have sold this squash for a number of years, we again call special attention to it.

Mammoth Chili. The largest of all squashes, growing to an immense size, often weighing over two hundred pounds, while its rich fine-flavored flesh insures its value for all purposes.



STRAIGHT-NECK SUMMER. MAMMOTH WHITE BUSH



WARTY HUBBARD

Warty Hubbard. This is the best strain of Hubbard Squash. By its rough, hard, warty shell and its dark olive green color it can be distinguished from any other strain, either in the field or on the market. It was introduced in 1894 and since that time under different names at different places it has been given out to all who have called for the best stock of Hubbard Squash. We have maintained its purity by continued selection and offer headquarters seed.

Golden Hubbard. This is a very distinct sort, of the shape and general character of the Hubbard, but a little smaller; of rich orange red color, instead of the dark olive green.

Delicious. This is one of the best Winter varieties. Its color is almost uniform of a green shade, with occasionally a blue specimen, it being just about as pure in this respect as was the original Hubbard. In size it also closely follows the original Hubbard, which weighed between 5 and 10 pounds. In thickness of flesh it surpasses nearly every variety, the color being a dark orange.

Fordhook. The vines are of strong, vigorous growth and wonderfully productive. Fruits oblong in form, eight to ten inches in length, slightly ridged; smooth, thin, yellowish skin; flesh very thick and of a light straw yellow.

TOBACCO

Pennsylvania Seed Leaf. This is the variety mostly grown for cigars, and is of fine quality and excellent flavor.

Persian Rose. A fine brand for cigars. Sells well.

Yellow Pryor. A fine yellow sort, and succeeds well where others fail.

Blue Pryor. This is the genuine article and a good sort.

General Grant. Very early, and a good yielder.

Connecticut Seed Leaf. The best sort for cigar wrappers. Try it.

Havana. This is the genuine article, and is first-class.

Ohio. White leaved. A large yielder.



CONNECTICUT SEED LEAF TOBACCO

TOMATO

The tomato requires one hundred days or more to mature from seed. As tomatoes are killed by other than light frost, early tomatoes should be started in hot beds two months before they may be transplanted out of doors. Three weeks later these plants may be potted or given a space of four by four inches in the hot-beds. Before setting in the field, which is May north of the Ohio, the plants should be gradually exposed to the outside conditions and the quantity of water given them decreased.

Transplant on a cloudy day if possible, and water freely. Nitrate of soda may be given each plant at this time with profit. A space of four by four feet should be given each plant in the field or more for robust varieties, except that where they are carefully pruned and trained, which is unnecessary, they may be planted as close as two by two feet. One ounce of seed gives two thousand plants.

Spark's Earliana. Said to be the earliest large tomato in the world. This tomato is not only remarkable for its earliness, but for its very large size, handsome shape and bright, red color. Its solidity and fine quality are quite equal to the best medium and late sorts. From less than 4,000 hills the originator realized from his first pickings \$725.00 clear of freight and commission, being in the market fully a week before all others.

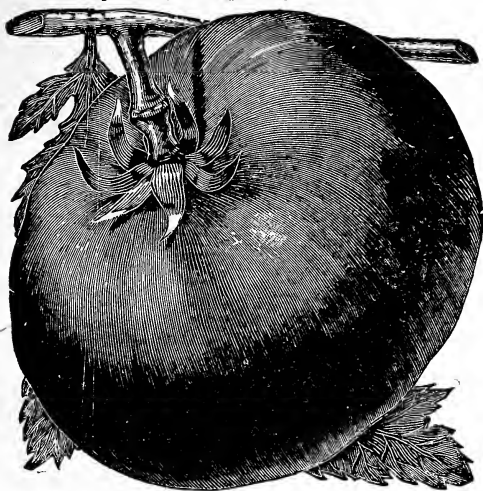
Chalk's Early Jewel. The largest, smoothest and finest flavored extra early tomato in cultivation. Within a week to ten days as early as the famous Spark's Earliana.

Crines June Fink. A fine new variety. It is highly recommended to gardeners whose trade demands the purplish pink sort.

Livingston's Favorite. A well known red variety, smooth and solid.

Optimus. One of the best table tomatoes. Vine medium sized, vigorous and strong. While not classed as a first early, it is reported by growers to ripen fully as early as many of the earliest, making an excellent forcing variety. The fruit is medium sized, oval, very smooth, and of a very bright crimson-scarlet color.

Dwarf Champion. This is a purple fruited variety, which forms very strong plants about two feet high. The branches are short, making a bushy plant that stands quite erect without stakes. This sort is often sold as Tree Tomato. Fruit smooth, medium sized, color purplish pink, fairly solid, but has no hard



SPARK'S EARLIANA

core, and is of good flavor. About as early as any purple fruited tomato, and is quite popular in some localities, both for market and home use.

Perfection. A splendid red variety, hardy, productive, and a good bearer.

Atlantic Prize. A very early variety, fairly smooth; good for first crop.

Trophy. A good main crop sort. Color, red, fruit large.

Mikado, or Turner's Hybrid. One of the latest of the good market varieties. The vines are very distinct. Have a potato leaf appearance. In color, this sort is like the Acme, fine, large, smooth fruit.

Ponderosa. This variety, when conditions are favorable, grows to an immense size and makes the heaviest fruit of any in the list. Our stock is from the original strain. None better.

Acme. One of the best standard sorts. Of a fine crimson purplish color. Shape is smooth, size large and uniform. For the market or home garden no sort is better.

Livingston's New Globe. Is of beautiful globe shape, with quite a percentage of elongated fruits, which permit of a greater number of slices being taken than with flat fruited sorts.

Beauty. A decided favorite for either home market or shipping purposes, being early, hardy, a strong grower, productive, large size, always smooth, perfect in shape, and excellent in quality. The color is a very glossy crimson, with a tinge of purple. It grows in clusters of four to six large fruit, retaining its large size late in the season. It ripens with Acme and Perfection, and is entirely free from ribbed and elongated fruit.

New Stone. A fine new, red variety, very solid and smooth; a splendid main crop sort.

Matchless. A good canning and all purpose, tomato, splendid for kitchen.

Husk, or Ground Cherry. This is a small sized fruit grown within a husk. It is valuable for preserving and making into pies, or for eating from the hand.

Crimson Cushion. A large fruited variety; smooth on top but inclined to curve at the ends, making an indentation at the stem. Color a glossy crimson tinged pink. Fruit ripens evenly, except toward the stem, where it ripens somewhat slowly. A very solid heavy tomato.

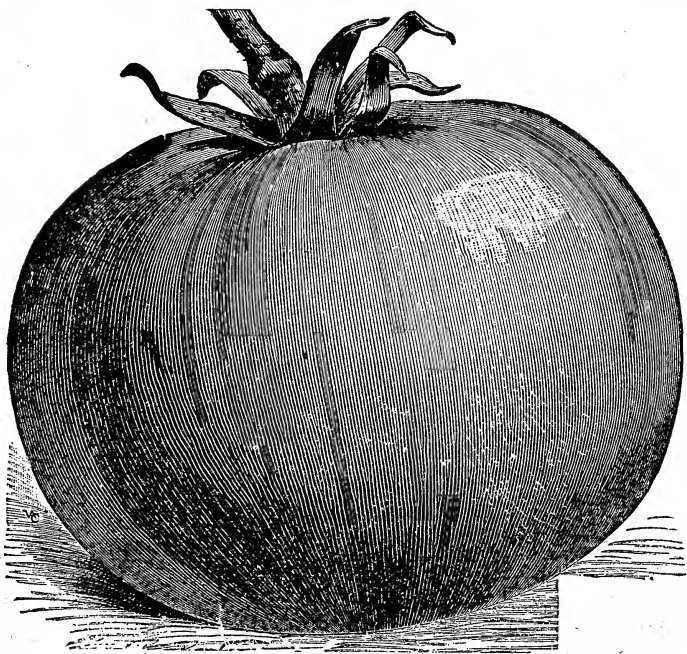
Buckeye State. One of the best late purplish pink varieties. Vine exceptionally strong growing and vigorous, and growers in some sections of the South claim it is bight proof. It should be given more room than most. Fruit very large, round, smooth and firm. An excellent shipper.

Golden Queen. Fruit large and smooth; color a beautiful golden yellow, sometimes with a slight blush of red, as smooth and well shaped as the best of the red varieties and of superior flavor.

Red Rock. An extraordinarily solid, smooth, very red tomato; a very heavy producer, of excellent shape and very superior texture and flavor. An excellent variety for truckers and canning factories on account of its shape, quality and productiveness. This tomato is very free from cracks, has a very shallow stem attachment and is practically smooth. Fruits will probably average from 8 to 9 ounces. Borne in clusters of from 4 to 7 fruits, and ripens in 110 days from sowing of seed.

Trucker's Favorite. The finest large-fruited purple tomato. The fruits continue of large size to the very last and are always unexcelled for slicing or cooking.

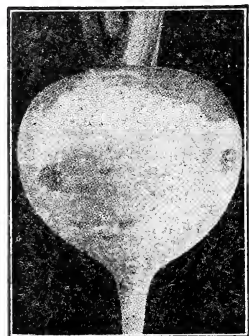
Success. The vines are of strong, vigorous growth with abundant foliage. The fruits, set in clusters, average 3 inches in diameter and 2 to 2½ inches through from stem to blossom end. Color brightest scarlet; perfectly smooth; very meaty, of fine flavor.



BEAUTY

TURNIP

While the main crop of turnips is planted in July north of the Ohio, more turnips should be grown in early spring. Seed may be broadcast on the few soils freed of weeds, but it is more advisable to sow in one or two-foot drills, cover less than one-half inch and thin to stand six inches apart in the row. Use one-half ounce of seed to one hundred feet of row and two pounds to the acre. The turnip requires one-half more seed when broadcast than in drills and the salad turnip requires one-half more seed than the turnip sown for a root crop.



PURPLE TOP GLOBE

Extra Early White Milan Turnip. The Early White Milan is one of our most popular turnips for spring sowing, a splendid extra early turnip in which the extreme earliness, small top and tap root of the Purple Top Milan is united with clear white skin and flesh.

Pomeranian White Globe. This is one of the most productive kinds, and in good, rich soil roots will frequently grow to twelve pounds in weight. It is of perfect globe shape; skin white and smooth; leaves large and dark green.

Purple Top White Globe. An early variety. Globe shaped; heavy cropper. In other respects similar to the Red Top Strap Leaf. A handsome looking bulb. And is rapidly taking the lead of all other varieties of early turnips for market garden purposes.

Extra Early Purple Top Milan. The earliest in cultivation, two weeks earlier than Purple Top Strap Leaf. The bulb is flat, of medium size, quite smooth, with a purple top. Flesh, white, hard and of finest quality. It is an extra good keeper.

Large White Norfolk. The Standard variety for field culture for feeding stock. Very large size.

Cow Horn. This variety is pure white, except a little shade of green at the top, and is carrot-like in form, growing nearly half out of the ground, and slightly crooked. It is delicate and well flavored, of very rapid growth, and has obtained considerable favor as a market sort for fall and early winter use.

Early Snowball. A perfectly globe-shaped, white-skinned turnip. It is exceedingly productive. The flesh is fine grained, firm and of very delicate flavor. It is one of the best keeping of the white-fleshed sorts. Very early and particularly adapted for family or market use. We recommend it to market gardeners because its earliness and fine appearance make it a very profitable variety of turnip.

Early White Flat Dutch. An excellent garden variety. The best for spring sowing.

White Egg. Belongs to the class of quick growing fall turnips. Its shape is nearly oval or egg, as its name would indicate.

Seven Top. Cultivated extensively in the South for the tops, which are used for greens. It is very hardy and will grow all winter, but does not produce a good root, and is only recommended for the tops.

Purple Top Strap Leaf. Rapid grower and mild flavor. The most popular variety for early use, either for the table or stock.

Yellow Aberdeen. Very hardy and productive; a good keeper; globe shaped. Color pale yellow with purple top. Very firm in texture, and closely resembling the Rutabaga in good keeping qualities. Good either for table or stock.

Large Amber Globe. One of the best varieties for a field crop for stock. Flesh yellow, fine grained and sweet; color of skin, yellow; top green. Hardy, keeps well, a good cropper. Very popular in the South.

RUTABAGA

Rutabagas, or Swedish Turnips, with their superior keeping qualities had best be drilled a month earlier than other turnips, given eighteen to thirty-inch rows and thinned to stand six to twelve inches apart in the row.



IMPROVED AMERICAN RUTABAGA

Improved American. The best yellow fleshed, purple top variety grown for stock or table.

Budlong's White Rock. Though sometimes called a turnip, this is more like a rutabaga. The root is large, both skin and flesh very white. An excellent keeper and a desirable sort for market gardeners.

White Rutabaga. This variety is now extensively cultivated, and preferred in many sections for its white flesh. It is very hardy and productive, keeps well until late in the spring, and is highly esteemed for its sweet, delicate flavor.

Laing's Improved. One of the earliest of the rutabagas. Forms a handsome bulb of good quality. Keeps well; good for table use.

Long White French. A very delicate flavored variety. An excellent keeper and fine for table.

Skirving's Purple Top. A very heavy cropper. One of the best for field culture.

Carter's Imperial Hardy. An English variety resembling the preceding. Very productive and of fine quality.

Monarch or Tankard. This is a yellow fleshed sort having very large tankard shaped roots, with relatively small necks and tops. Color purplish crimson above ground, yellow below; flesh very solid, fine grained and of the best flavor. This very popular variety is also sold as Hurst's Monarch and Carter's Elephant.

Drummond's. An improved strain of purple top Swede, excelling in uniformity of shape, color and quality. Considered by many an excellent table sort.

Sweet German. A superior variety for table or stock. Flesh firm, sweet and juicy.

Bangholm. A very superior variety, both in form and quality, and held in high estimation in many parts of England. Of large size, small neck, few or no side roots, and yields well. Flesh yellow, sweet and solid; skin yellow with purple top.

CHOICE FLOWER SEEDS

STANDARD VARIETIES

Most flowers are as easily grown as vegetables. In the select list that follows will be found flowers and plants for many uses. Some plants used for cuttings bring the sunshine to those that must live indoors, while others are useful for cemetery lots, a tribute to those that precede us. Some plants can be grown in a partial shade, where grass does not grow, and others are serviceable in hanging baskets or veranda boxes. Some vines or tall plants may be grown to hide or make more sightly some fence or pile of stone or stump or building. Flowers are just as necessary as are pictures, and to their beauty is often added such stimulating and pleasing perfumes as cannot be bought in bottles.

Flowers fall readily into three classes:

Annuals bloom, seed and die the first year.

Biennials bloom and die in their second year, but they may bloom also in their first year.

Perennials flower for several years and some of them may bloom in the first year of their existence.

ASTERS

Of the general beauty of these flowers it is unnecessary to speak; the immense world-wide demand for them shows their adaptability for any climate; and, coming into bloom, as they do, when most other flowers are fading away, enhances their value. For the best results the ground for the cultivation of Asters cannot be too richly prepared, although they will give satisfactory returns on any ordinary garden soil.

Dwarf Chrysanthemum-Flowered. Large double flowers resembling chrysanthemums, and valuable on account of profuse late flowering. All colors mixed.

Daybreak. The plants grow stiffly erect, eighteen to twenty inches in height, with ten to fifteen branches, each bearing a very large, extremely double flower, with incurved petals. The broad silvery petals are suffused with soft delicate pink.

New Giant Comet Asters, Mixed. With good cultivation, flowers of this type frequently measure four inches across, and in their fine form, large size, and long stem approach in beauty the fine Chrysanthemums grown in the greenhouse during the late fall months.

Sample's Branching. All colors mixed of this favorite long-stemmed strain.

Queen of the Market. Of graceful spreading habit, it is in full flower two weeks before most other asters. Deep blue, white, pink, and rose in mixture.

Victoria. Flowers very large, double, and beautifully reflexed. The plants bear ten to twenty flowers, with the appearance of an elegant pyramid; one and a half feet. All colors mixed.

Christmas Tree. This new type is of a branching pyramidal form.

Truffaut's Pæony-Flowered Perfection. Very double, large and beautiful flowers, with incurved petals.

German Quilled. The common double asters.

Mixed Asters. Many varieties of different types.



COMET ASTER



MARGARET CARNATION

Acroclium. Summer flowering and an "everlasting."

Ageratum (Floss Flower). For edging or pots.

Alyssum, Sweet. Trailing and fragrant.

Alyssum, Little Gem (Carpet of Snow).

Amaranthus. Tricolor (Joseph's Coat).

Antirrhinum (Snapdragons). Tall mixed.

Antirrhinum, Tom Thumb. Mixed, fine strain.

Asparagus Plumosus Nanus. A house plant.

Asparagus Sprengeri. For suspended baskets.

Bachelor's Button (Ragged Sailor or Corn Flower).

Balloon Vine. A white flowered climber.

Balsam (Lady Slipper). A garden flower.

Calliopis or Coreopsis. For bedding.

Candytuft. For cutting or beds.

Canna. A fine bedding plant.

Canterbury Bell. A hardy biennial.

Carnation. For pot and outdoor culture.

Castor Bean. Tall, stately plants.

Chrysanthemum. Summer flowering and for cutting.

Cinerari. Daisy-like bright flowers.

Cobea Scandens. Bell-flowered, rapid climber.

Cosmos. For autumn flowering background.

Cockscomb. For the garden or in pots.

Coleus. Attractive foliage plants.

Cypress Vine. Flowered rapid climber.

Dahlia. A late summer and autumn flower.

Daisy. Fine quality double mixed.

Forget-Me-Not. For the shaded spot.

Four o'Clock (Marvel of Peru).

Fox Glove or Digitalis. For the half shade.

Fuchsia. For half shade or pot culture.

Geranium. For window boxes and pots.

Globe Amaranth. Dry for winter bouquets.

Godetia. For borders and pot culture.

Gourd. Apple Shaped, Bottle, Dipper, Dish Cloth,

Hercules Club, Japanese Nest Egg, Mock Orange,

Pear Shaped, Sugar Trough.

Gypsophila (Baby's Breath). For edging.

Helichrysum. The Straw Flower.

NASTURTIIUM

For ease of culture, duration of bloom, brilliancy of coloring and general excellence, nothing excels Nasturtiums. All they need is a moderately good soil in a well drained, sunny position, and from within a few weeks from the time they are sown until hard frost comes there is an endless profusion of their gorgeous blossoms.

DWARF

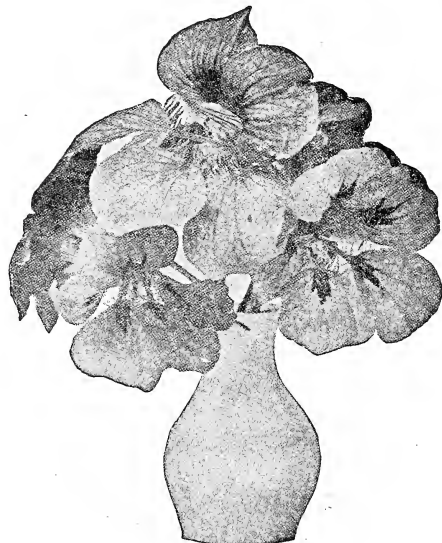
Chameleon. The colors vary from yellow to deep crimson.
Empress of India. Brilliant dark scarlet.
Golden King. Beautiful rich dark gold.
Golden Queen. Golden yellow leaves and flowers.
King of Tom Thumb. Deep scarlet flowers.
King Theodore. Black-red; the darkest variety grown.
Pearl. Creamy white.
Rose. Deep bright rose, tinted salmon.
Ruby King. Ruby-red, with salmon tint.
Yellow. Bright yellow; no blotches.
Dwarf Varieties Mixed.

TALL

Chameleon. Flowers similar to Dwarf Chameleon.
Dark Crimson. Deep velvety crimson.
Hemisphaericum. Straw color, blotched with rosy pink.
Lemon Yellow. Clear bright yellow.
Orange. Deep orange, blotched.
Pearl. Creamy white.
Rose. Soft pink; a very choice sort.
Scarlet. Bright orange scarlet.
Tall Varieties Mixed.

LOBB'S CLIMBING NASTURTIIUMS

Brilliant. Deep scarlet.
Crystal Palace. Very bright, orange salmon flowers.
Spitfire. Bright, fiery scarlet.
Choice Mixed.



NASTURTIIUM

SWEET PEAS

In few lines of endeavor has the advancement been so rapid as in the development of sweet peas. This the public seems to appreciate and this flower is today a general favorite.

If possible, for sweet peas spade deeply a well drained soil in the fall and add any good compost, including some wood ashes or lime. As early as the ground can be worked in spring plant the peas in a trench five inches deep and cover with one inch of sand or fine soil. When the peas are well above the ground fill the trench and thin the peas to stand two to three inches apart in the row. When planted, or very soon afterward, set some four to five-foot supports. Mulch with lawn trimmings, water thoroughly once a week, and cut frequently to keep the plant flowering.

With a select list of varieties we list several excellent mixtures.

Admiration. Rosy lavender.

Agnes Eckford. Light pink.

America. Blood red striped white.

Aurora. Orange rose, striped white.

Blanche Ferry. Pink and white.

Black Knight. Dark maroon.

Captivation. Rosy purple, large.

Earliest of All. Pink and white.

Earl Cromer. Claret magenta.

Emily Eckford. Reddish mauve.

Emily Henderson. Pure white.

Evelyn Byatt. Fine orange salmon.

Extra Early Blanche Ferry. Pink and white.

Lady Mary Currie. Orange pink, shaded lilac.

Lady Nina Balfour. Delicate mauve.

Lottie Eckford. White, suffused lavender.

Lovely. Soft shell pink.

Maid of Honor. White edged lavender.

Mrs. Collier. Primrose, delicate shades.

Mrs. Joseph Chamberlain. White, flaked rose.

Mrs. E. Kenyon. Primrose.

Navy Blue, deep Blue.

New Countess. Delicate lavender.

Othello. Dark maroon.

Prima Donna. Pure pink.

Prince of Wales. Bright rose, self color.

Queen Alexandra. Bright scarlet red.

Royal Rose. Rosy pink.

Sadie Burpee. Large, pure white.

Senator. Chocolate, striped white.

Shasta. Pure white.

Stella Morse. Rich primrose, flushed pink.

Sunbeams. Delicate cream.

Sybil Eckford. Creamy buff.

Triumph. Standard rose, wings veined with scarlet.

Venus. Salmon buff.

California Sunbeams. Cream color, fine.

Coquette, primrose yellow, shaded lavender.

Countess of Cadogan. Reddish mauve, wings blue.

Dorothy Tennant. Rosy mauve.

Dorothy Eckford. One of the best whites.

Duke of Westminster. Deep rose maroon.

Gorgeous. Bright orange salmon.

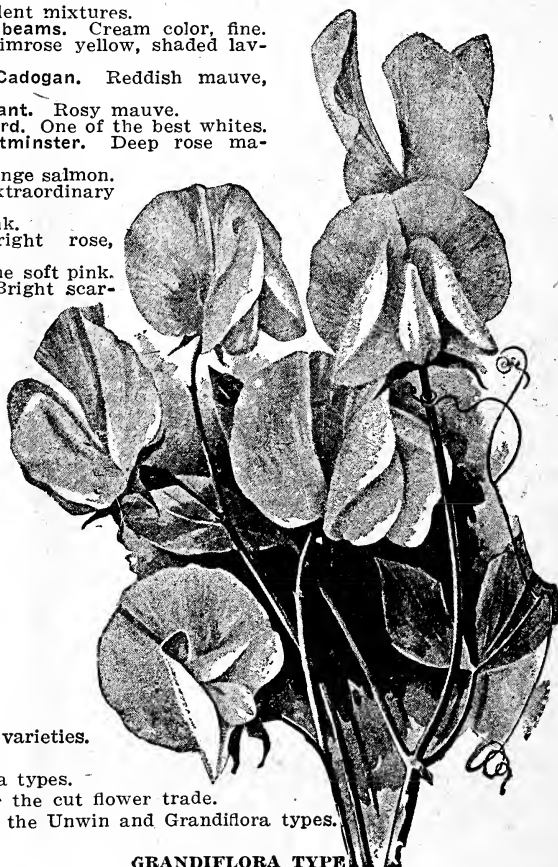
Henry Eckford. Of extraordinary orange color.

Janet Scott. Fine pink.

Jeanie Gordon. Bright rose, shaded cream.

Katherine Tracy. Fine soft pink.

King Edward VII. Bright scarlet, large flower.



GRANDIFLORA TYPE

MIXED SWEET PEAS

Choice Mixed. The best blending of the choicest named varieties.

No better mixture can be had.

Eckford Mixed. A very choice mixture of the Grandiflora types.

Florists' Mixed. A blend of the sorts best suited for the cut flower trade.

Named Sorts Mixed. Blended from the named sorts of the Unwin and Grandiflora types.

Spencer Varieties Mixed.

Christmas Flowering Mixed.

CHOICE FLOWER SEEDS—(Continued)

Heliotrope. For bedding, bouquet and its perfume.

Hollyhocks. For a tall background.

Hyacinth Bean. A flowered climber.

Ipomoea. A flowered rapid climber.

Setosa (Brazilian Morning Glory).

Grandiflora (Moon Flower).

Bona Nox (Evening Glory).

Jobs Tears. Grass with slate colored seeds.

Kochia (Summer Cypress or Burning Bush).

Larkspur. For bedding or cutting.

Lathrus Latifolius (Everlasting Pea).

Lobelia. For pot culture or bedding.

Linum (Flowering Flax). For bedding.

Love-in-a-Mist (Lady-in-the-Green).

Marigold. Bedding or borders.

African Double. Orange color.

Eldorado. Several shades of yellow.

French Dwarf. Brown-red.

Mignonette. For cutting and its perfume.

Sweet. The old variety.

Golden Queen. Fragrant and yellow.

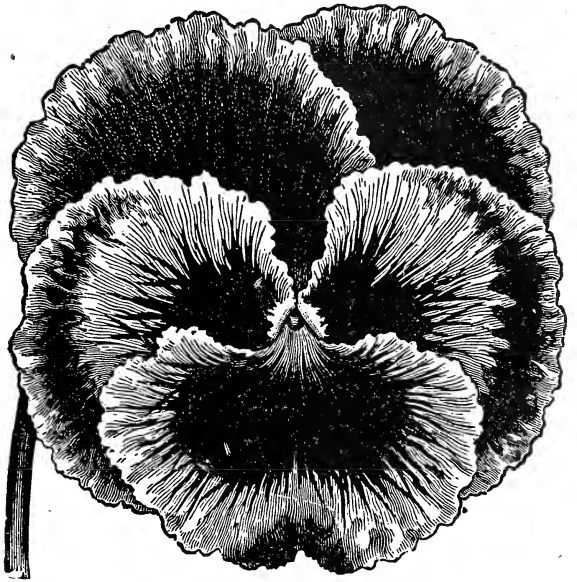
Machet. Red flowered.

Morning Glory. The well known climber.

White.

Blue.

Crimson.



GIANT FIVE-SPOTTED PANSY



DOUBLE POPPIES

Portulacca (The Moss Rose).

White

Pink.

Crimson.

Mixed. Many colored.

Double Mixed. Many colored.

Pinks. Old Fashioned Favorites.

Double China.

Double Diadem.

Single Mixed.

Eastern Belle.

Salpiglossis. For border or bedding.

Salvia. (Flowering Sage).

Sensitive Plant. Leaves droop

when touched.

Sun Flower. For screen or back-

ground.

Sweet William. For bedding and

borders.

Verbena. For window boxes or

bedding.

Wild Flower. Garden mixture.

Wall Flower. For bedding and

bouquets.

Zinnia. For bedding and bouquets.

Mimulus Moschatus (Musk Plant). For hanging baskets.

Tigrinus (Monkey Flower). A pot plant.

Mourning Bride. Borders, beds and cuttings.

Nicotiana Sanderae. Flowered Tobacco.

Affinis. White and fragrant.

Pansy. Emperor William. Deep blue.

King of Blacks. Darkest flower grown.

Giant Five-Spotted.

Trimardeau. Mixed finest strains.

Extra choice mixed.

White.

Yellow.

Blue.

Petunia. Fine mixed, for bedding.

Phlox. Mixed, for bouquet or bedding.

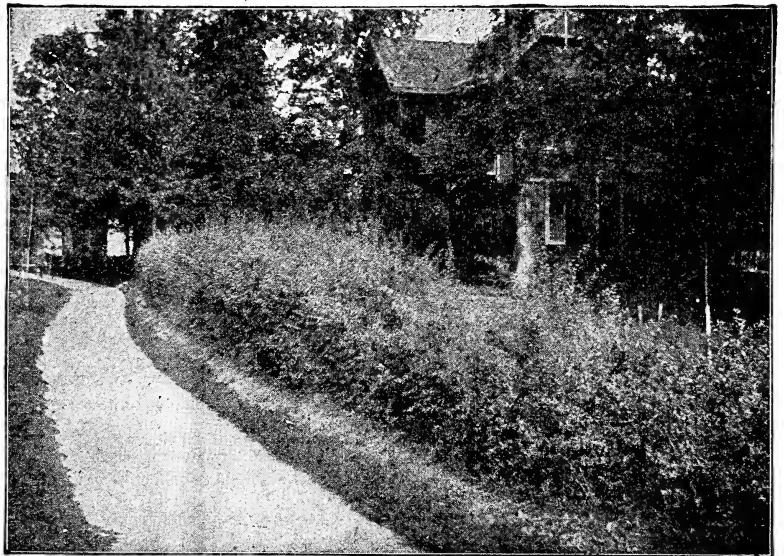
Alba. Pure white.

Poppy Carnation. Mixed colors, double fringed.

Iceland. A perennial double.

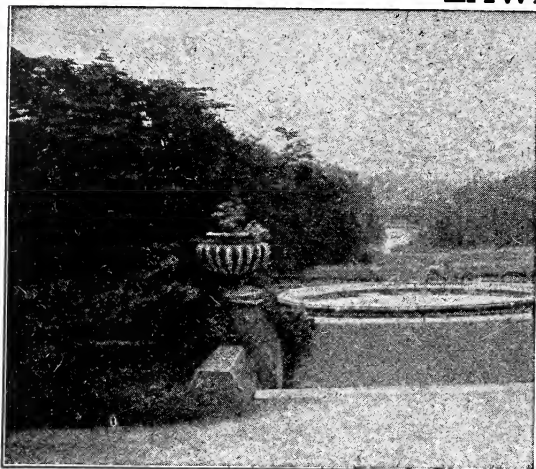
Mikado. The striped Japanese.

Shirley, of many colors.



A BORDER OF SALVIA

LAWN GRASS



permanent, thick and velvety sward of grass, this brand of Lawn Grass cannot be excelled. It is the best mixture of grasses, we sell for lawn making, and will give satisfaction wherever sown.

Mixture for Shaded Spots. Usually it is quite difficult to obtain a satisfactory growth of grass under trees and in shady places; for sowing in such places we recommend the use of this special mixture. It will quickly produce an abundant and even growth of beautiful green grass.

Your outdoor carpet should be of an even colored grass that grows so close that weeds cannot get through. Think of your lawn as a number of plants, not "just grass." These lawn plants ask what other plants require: good drainage, a soil of a fit quality, the addition of lime where soil is sour, deep preparation by spading or plowing, the addition of fertilizers before planting and from time to time afterwards as the plants continue to feed, and good seed. Where manure is used at any time it should be thoroughly decomposed and free from weed seed and a complete fertilizer at the rate of 500 pounds to the acre is advantageous.

Seeding had best be done in the spring or fall. Be careful to have the entire surface as near alike as possible that the grass may be even in its growth and finish by using a fine rake and a heavy roller. Seed heavily. Use seventy-five pounds of the best lawn mixture to the acre, or one pound to three hundred square feet. Sow the seed carefully on a calm, dry day and rake lightly.

Cut the lawn frequently, setting the machine to cut as high as possible, and as weeds grow where grass seed is now sown, weeds will grow in your lawn and some of them it may be necessary to dig out with a knife.

In very dry weather a thorough wetting should be given about once a week, a little water on a dry surface doing more harm than good.

Each spring after the winter heaving of the lawn by frost is over, the lawn should be re-rolled while the soil is wet.

Park Lawn Grass Mixture. For quickly producing a

GRASS SEED

Blue Grass. (*Poa Compressa*.) Commonly called Canada Blue Grass. A very valuable grass for pasture and lawns. Market Price.

English Rye Grass. (*Lolium Perenne*.) A very nutritious rapid growing variety, valuable for meadows and pastures. Twenty-four pound bushel. Market Price.

Tall Meadow Oat Grass. (*Avena Elator*.) This produces an abundant supply of foliage and is valuable for pasturage on account of its early and luxuriant growth. Market Price.

Sweet Vernal Grass. (*Anthoxanthum Odorum*.) Permanent pastures should not be sown without a portion of this grass. Market Price.

Hard Fescue. (*Festuca Duriuscula*.) Similar to Sheep's Fescue, but not so dense, and growing somewhat taller. Market Price.

Red Top. (*Agrostis Vulgaris*.) A valuable grass for moist soils and low lands. It is a good, permanent grass, standing our climate well.

Solid Seed, Best Grade. Market Price.

Chaff Seed. Market Price.

Timothy. (*Phleum Pratense*.) This is decidedly the best grass for hay. Market Price.

Italian Rye Grass. (*Lolium Italicum*.) A valuable European variety, adapted to any climate, and produces large and nutritive crops. Eighteen-pound bushel. Market Price.

Orchard Grass or Rough Cocksfoot. (*Dactylis Glomerata*.) This is one of the most valuable and widely known of all pasture grasses. It is well adapted for sowing under trees or orchards. Market Price.

Meadow Fescue or English Blue Grass. (*Festuca Pratensis*.) Needs rich ground, and succeeds well on prairie soil. Sow about twenty-five pounds per acre. Market Price.

Wood Meadow Grass. (*Poa Nemoralis*.) One of the best varieties to sow in shaded situations, such as orchards and parks, for either hay or pasturage. Sow about thirty pounds to the acre. Market Price.

Creeping Bent Grass. (*Agrostis Stolonifera*.) Particularly valuable for lawns that are to be used as croquet and tennis grounds. Market Price.

Meadow Foxtail. (*Alopecurus Pratensis*.) Valuable for permanent pastures, and does best on good moderately moist soil. Market Price.

Tall Fescue. (*Festuca Elator*.) A valuable perennial grass, very productive and nutritious. If used alone, sow forty pounds per acre. Market Price.

Blue Grass. (*Poa Pratensis*.) Commonly called Kentucky Blue Grass and known in some sections as "Green Meadow Grass" and "June Grass." It is the best pasture for our climate and soil, succeeding finely on hill lands and producing the most nourishing food. Sow early in the spring or during the months of October and November. Fancy clean seed. Market Price.

CLOVER SEED

Medium Red or June. (*Trifolium Pratense*.) Sow in spring or fall, at the rate of eight or ten pounds per acre. Market Price.

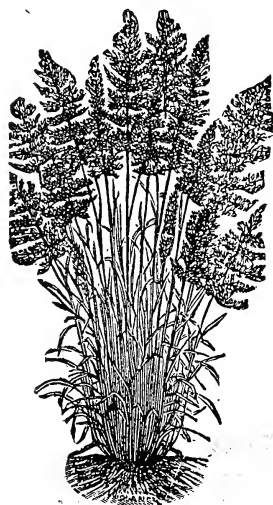
Mammoth or Large Red. (*Trifolium Pratense*.) Sow at the rate of about eight pounds per acre. Sixty pounds per bushel. Market Price.

White Dutch. (*Trifolium Ripens*.) A small, creeping, spreading, perennial variety, valuable for pasture and lawns. Market Price.

Alsike or Swedish. (*Trifolium Hybridum*.) This valuable variety is fast gaining great popularity.

Alfalfa or Lucerne. (*Medicago Sativa*.) Will bear cutting three or four times during the season. For bringing up poor land it is the best of the clovers. Market Price.

Crimson or Scarlet Clover. Can be seeded at any time from June to October, at the rate of fifteen to twenty pounds per acre. Market Price.



RED TOP GRASS



ENGLISH RYE GRASS

FIELD CORN

Prices Change. Ask for Market Price

Pride of the North. This famous corn still retains its popularity; an exceedingly early and prolific variety, always maturing in ninety days; often shelling sixty-two pounds of grain from seventy pounds of ears. Kernels closely set, large, of deep orange color; cob very small and red; stalks about seven feet in height. This is, probably, the best Dent corn for general cultivation in the north.

Champion White Pearl. Originated in Illinois, and is enormously productive; a strong grower; matures in about 100 days. The stalk is stout and thick, with large ears set low.

Iowa Gold Mine. A splendid yellow corn. Everyone who has tried it is enthusiastic in the praise of this splendid variety which was introduced in 1892. It has everywhere received the most cordial endorsement as one of the best and most profitable varieties ever grown.

Iowa Silver Mine. The Iowa Silver Mine is a splendid white corn. In 1894, the poor corn year, it yielded at the rate of ninety-seven and one-third bushels to the acre. It has no barren stalks. The ears are very even in size, being but little smaller at the tip than at the butt, and corn is well filled out over the tip.

Longfellow Flint. This is an eight-rowed Yellow Flint variety, the result of careful selection. The ears are from ten to fifteen inches long, one and one-half to one and three-fourths inches in diameter, are well filled out to the extreme end of cob.

Canada Eight-Rowed Flint. This standard Flint corn is the earliest of all. It is a safe corn to plant where the season is short. It will mature in eighty-five days of good corn weather.

Improved Leaming. The Improved Leaming Corn is a medium early yellow variety; large, slightly tapering ears, deep grain, and medium sized red cob. In favorable years there is much uniformity of both kernels and ears. Its numerous broad leaves not only encourage a healthy development but make it a valuable variety for feeding.

MISCELLANEOUS GRAINS

FIELD PEAS.

White Canada.
Blue or Green.

COW PEAS.

Black Eye.
Whip-Poor-Will.
Black. Seed all black.
Clay Colored.

MILLET SEED.

Japanese Barnyard.
Siberian.
Pearl.
Hog.
Common.
German or Golden.
Hungarian.

MISCELLANEOUS.

Spurry.
Lahyrus Sylvestris.
Barley, Common.
Rye, Spring.
Rye, Winter.
Buckwheat, Silver Hull.
Buckwheat, Common.
Buckwheat, Japanese.
Flax Seed, for Sowing.

BROOM CORN.

Improved Evergreen.
Early Japanese.

SUGAR CANE.

Early Amber.
Early Orange.

KAFFIR CORN

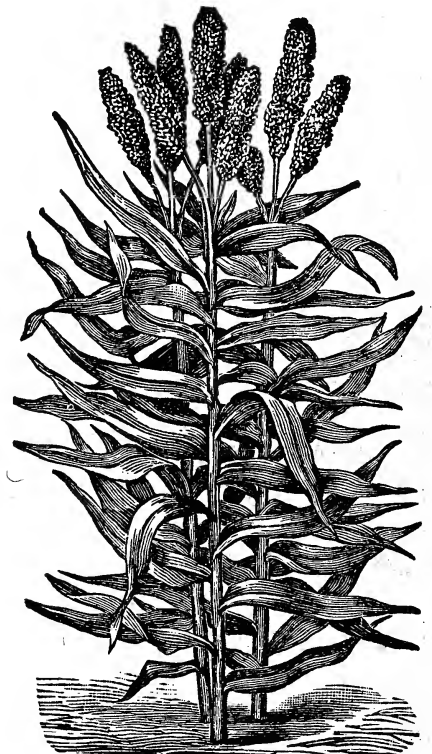
Kaffir Corn. One of the best forage plants. If the

crop is wanted mainly for fodder, it is recommended to cut down the whole stalk when the first seed heads come into bloom.

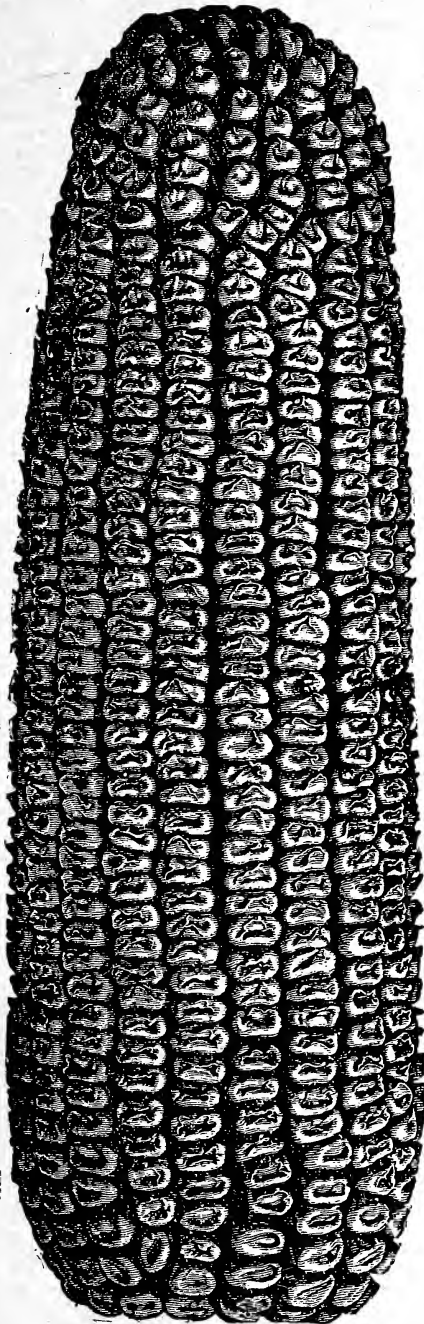
Dwarf Essex Rape. A forage plant of great merit, easily grown in any part of the United States, on any land that will raise turnips or corn, and will furnish abundant supplies of succulent, rich, nutritious pasture, at a season when it is most needed.

Russian Sunflower. This is highly prized by poultry raisers and farmers as a cheap food for fowls. It is immensely productive and can be raised cheaper than corn, as any waste piece of ground will suffice. It is the best egg-producing food known.

PRICES VARY ON ALL FARM SEEDS
WRITE FOR MARKET PRICE



KAFFIR CORN



NOTES ON GARDENING

While it is in a way true that anyone can garden, intelligence tells more quickly in agriculture, possibly, than in any other line of endeavor. Yet so many and varied are the ways of reaching a result in agriculture that no two experienced and successful growers would agree entirely upon the treatment of a crop or a piece of land. It does not follow that either grower is right or wrong, we would rather say that in the agricultural seas there are many good pilots with well charted courses and bid them "bon voyage."

In the work of gardening a sharpened stick or at most a hoe and a spade is all that is absolutely necessary, but the result will be vastly improved by the use of modern tools, hotbed frames and sash, some insecticides and a fungicide, drain tile, a compost heap and fertilizer.

Hotbeds. While early in the year plants may be started in a sunny window, it is of profit and advisable to use hotbeds and cold frames for even a small garden. From the first to the latter part of March is quite early enough to make a hotbed. The time must vary according to the latitude. Provide a quantity of fresh horse-manure from the stables, and add to this, if they can be had, one-third to one-half of its bulk of leaves. Mix them thoroughly, tramping down the mass in successive layers, and form into a large pile, so that fermentation will proceed, even in severely cold weather. In two or three days fermentation will be apparent by the escape of steam from the heap. Now turn again, and allow the heap to remain two or three days longer, or until the second fermentation commences. Make an excavation or pit 2½ feet deep, and of a size suited to the number of plants required. The pit will be better if built up of brick. It should be made in some dry, sheltered spot, facing the south or east, if possible. Hotbed sashes are usually 3x6 feet, and one or two sashes will give early plants enough for a small family. The frame for sashes should be 18 inches high at the back and 12 inches in front, which will give the proper slope to catch the sunlight. Cross-pieces should be placed for the sashes to slide on, to facilitate opening and shutting the frames. When everything is ready, the manure is placed in the pit and trodden down firmly in layers to the required depth, 2 to 2½ feet. Then put on the sashes, and keep the pit closed until the heat arises. At first it will probably be 100 degrees or more, which is too hot to sow the seed in; but in two or three days it will subside to 90 degrees or a little less, when the soil may be put on to the depth of 6 to 8 inches. The heat may be readily ascertained by plunging a thermometer into the manure. The soil should be of well-rotted sod (or common garden soil will do), mixed with about a third of fine old manure; and in this the seeds may be sown thinly in drills 2 to 3 inches apart, and afterward (as soon as out of the seed-leaf), either thinned out or else transplanted to another frame. Air must be given every mild day by raising the sashes at the back. Water with tepid water whenever necessary, and during cold nights and snow-storms keep covered with mats or board shutters. Tomatoes, Peppers and Eggplants should be sown in a separate frame from Cabbage, Cauliflower and Lettuce, as they require more heat. The same directions may apply to hotbeds made on the surface of the ground, except that the manure should be at least a foot wider on all sides than the frame.

Cold Frames are simply frames with tops of glass or cloth set on the ground, no bottom heat being applied. It is banked up on the outside during the winter with marsh hay, straw or coarse litter. The soil is prepared by forking in and thoroughly mixing to the depth of 10 or 12 inches a liberal quantity of old, well-rotted manure. The manure of an old hotbed is good for the purpose. The frame is prepared in the fall, and young Cabbage, Cauliflower and Lettuce plants are set out in it in time to get well established before very cold weather. Cauliflower and Cabbage should be set down to the first leaf, and the soil made firm around the plants. The seed is usually sown, in this vicinity, from the 15th to the 20th of September. The young plants will be ready to transplant in about 25 to 30 days. During cold nights and stormy days the beds should be closely covered with the sashes, and these further protected by straw mats or shutters. Cauliflower needs more and closer protection than Cabbage, and it is rather more tender. During mild days admit air freely, the object being to keep the plants in a dormant state, without actual freezing, so that when spring comes, they are in a forward state for setting out. Seeds of Cabbage, Cauliflower, Lettuce and Radish may be sown in a cold frame in the spring from the last week in February to the first week in March. The frame should stand in a warm and sheltered spot, and be kept from freezing by mats or a thick covering of straw during cold nights.

Even before the hotbeds are made or the first seed purchased the garden should be planned on paper.

If the garden has not been drained, preferably by tile, and there are very few pieces of ground that do not need drainage, an effort should be made to get rid of the surplus water so that the soil may warm up rapidly and bacterial life so necessary to plant life begin.

Frequently the application of lime or lime stone is more necessary than the application of commercial fertilizer and this question, too, must be answered early.

Stones and stumps, along with trees of no value, should be removed from the garden, and every effort possible made to get ready for the rush that comes with spring planting. There are easy ways as against the difficult ways of gardening, and from time to time the work should be carefully thought over with the idea of saving every effort possible. First of all, the vegetables should be planted in long rows so with a wheeled tool like the Perfection Garden Cultivator one can quickly cultivate the garden without stooping. It is also possible now to set plants while walking in an upright position and avoid the back-aches and suffering of other years by using a Masters Rapid Plant Setter. Tools like these should be secured before the day they are needed.

MASTERS RAPID PLANT SETTER

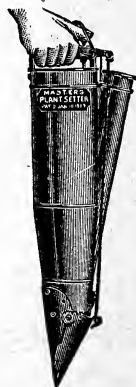
Is built to do actual plant setting. It is no plaything but is strong and durable, and with fair play will set out more than a million plants before it is worn out.

THE OPERATION

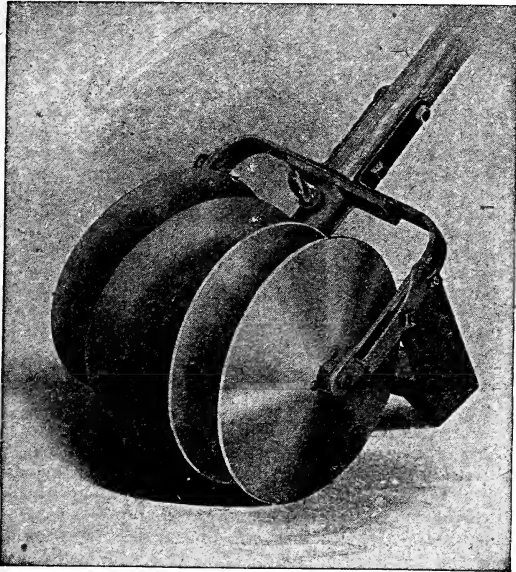
of your Plant Setter is very simple. You mark off your land both ways, then haul out a few barrels of water (about two barrels to the acre is usually enough), place these barrels on the headlands and have a few thousand plants all ready pulled, and place a good box full on the headland at the water barrels.

THE MAN

who is going to do the setting simply needs a common grape or peach basket with the handle cut off entirely, then pass a leather strap or stout cord through one side of the basket and fasten same around your waist; take the Planter in your right hand and have it nearly full of water and start down the row, putting in a plant at every mark clear across the field; fill up your basket with plants at the end of every row, also your Planter with water, and thus keep going back and forth across the field all day, and in ten hours any ordinary farm hand can set 10,000 to 12,000 plants and when a man gets well used to the Planter and has his land in the best condition possible he can set 15,000 plants per day without special effort.



Makes transplanting EASY, PLEASANT WORK and will produce a perfect stand of \$4.50 plants and a better quality crop. PRICE.....



PERFECTION GARDEN CULTIVATOR

Different From Others—Superior to All.

The lightest garden tool on the market.

Easiest to adjust.

Strongest in workmanship.

Easiest to operate.

Is a complete machine within itself.

Needs no extra parts.

The only garden tool made that throws the soil to or from the plants without extra attachments.

The scientific advocate of deep plowing does not mean deep plowing at once for all soils, but generally a gradual deepening of the soil by going a little deeper each year. Also by subsoiling and by dynamiting the subsoil, the roots of plants work to a lower level where they find little cisterns of water and new stratas-of-plant food. Deep plowed soil is slow to wash, so the land stays at home, retaining most of its fertility till some plant uses it. The successful Dutch farmer observed that the man who has one farm may soon have two—one above the other.

While the grower is building his land to two or three stories instead of one, he must not think of soil as inert and dead, something only to be analyzed by a chemist. Think of soil as a home where countless numbers of organisms will live if we give them an opportunity. There

these organisms will multiply with inconceivable rapidity. Organisms we cannot see without the use of a microscope we have used in many ways, as in the making of yeast breads and in the making of vinegar. Think of these modifications as being made partly by the work and partly by the presence of these microscopic live and dead bodies. So earth that is wisely plowed, well cultivated, also if necessary, drained and limed, modifies its appearance, feeling and texture, and becomes a new and a live soil.

With the little that man really knows about soil, there is much that he believes and still questions, and still more about which he asks questions and there returns no reply. Was the weed nature's attempt to shade the soil and prevent the surface baking or was the weed nature's effort to make man cultivate and earn? Never mind! When the soil seals and hardens on its surface, plant life is at once retarded or entirely discontinued. The most persistent plant is killed quickly under boards or sheets of tarred paper. It is necessary to give the soil air, and to do this, man cultivates the soil, often laboring with crude and awkward tools. In the soil home the man is trying to open the windows. By this cultivating or stirring of the soil man is also using a dust mulch to retain the necessary soil moisture.

While the plow had long been brought to a state bordering on perfection, the tool necessary to the thorough cultivation of the garden was conspicuous by its absence till the introduction of the Perfection Garden Cultivator. This Perfection Garden Cultivator, a new disk and knife weeder, is the final evolution in hand cultivators. It does the weed killing, cultivating and mulching at one process, something no other cultivator accomplishes. It can be worked in gravel soil or in stony land, through sticks and coarse stubble, or in the softest loam. As a deeper mulch is required in dry weather than in moist weather, as a crop as it advances in age requires more shallow cultivation, as different crops and soils require different treatment, this tool is adapted to them all. Preferred by the successful professional gardener or the most exacting amateur home gardener, the tool is also so simple a child can work it. While built for the gardener who wants a tool stout enough for his most robust workman, it is so easy of operation as to meet with favor in the hands of the woman flower grower or the little housewife.

The inventor of this tool is a practical onion grower and trucker. During his thirty years in truck farming and onion growing he has tried out all of the garden cultivators that have been made and recommended during that time. He knows the good points as well as the defects of each. From this knowledge he has perfected, after repeated efforts, this new tool, which, in a simple form, does all the work that can be done by the complicated attachments and combinations of the other tools.

One thumb screw is all that is operated in adjusting this tool. No attachments are necessary to make it do the work needed.

The two photographs show the tool complete. It is durable, made of the best material, and within the reach of all in price.

Perfection Garden Cultivator

Is made in three sizes, viz:

No. 1. With two discs, on which 6 inch or 7 inch knives may be used.

No. 2. With four discs, on which 7½ inch, 8¼ inch or 8½ inch knives may be used.

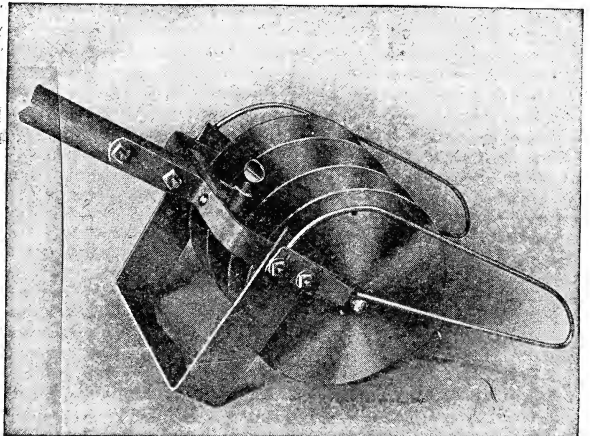
No. 3. With four discs, on which 10 inch or 11 inch knives may be used.

The No. 1 will work rows 9 to 11 inches wide, No. 2 will work rows 11 to 14 inches wide, No. 3 will work rows 13 to 16 inches wide.

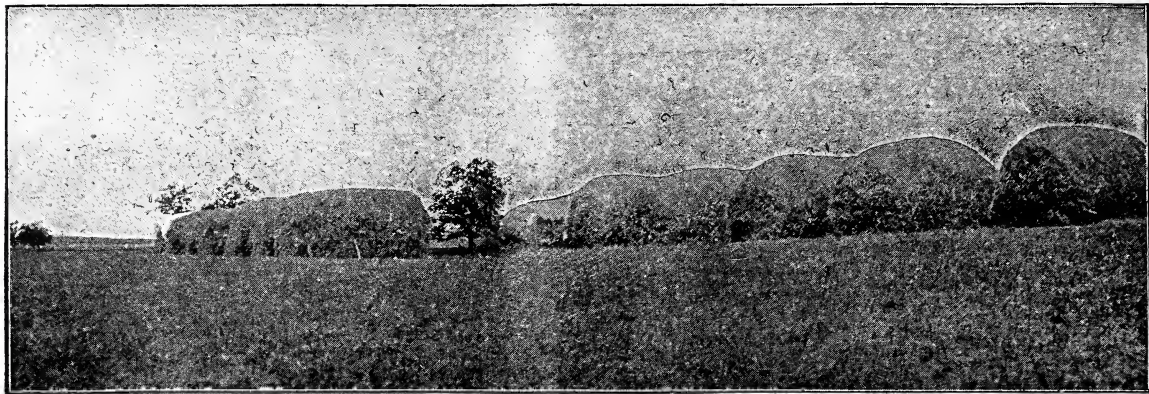
Mention what size knives you wish when ordering. The price is the same for any of the sizes.

Price \$3.50 Each

The stiff wire leaf guards keeps the tops of the plants away from the discs.



Notice the Thumb Screw that Adjusts the Discs



FERTILIZERS

There is an axiom that "what grows one year will decay the next." So among the economies practiced by the European and which must not be confused with that which is miserliness or stinginess is the use of a compost heap. This practice could well be copied here. Not only the individual American but our great cities throw away vast quantities of that which might be composted. The gardener had best select a spot removed from the residence and there save continually all weeds, grasses, leaves, poultry, and stable manure, soot, hoof and horn parings, bones, unused vegetables and fruit and refuse from the table. Earth and phosphate can be added to this compost heap, and while the heap should be kept moist enough to decay, it should be protected by a roof from rain. Later this compost should be spread upon the soil and plowed or spaded in.

As man advances he asks more varied kinds of foods. Or should we say as man secures more varied kinds of food he advances? So for plants as for animals, they are best fed when given many kinds of food. This is one of the reasons why the compost heap is so valuable. It is very probable that our commercial fertilizer of the future will contain several elements we are making no effort to feed plants now. As we expect different foods from day to day for ourselves, now we are changing and rotating fertilizers. The plant's dinner must not be the same on each bill of fare. Just as too much of one food might make our horse or ourselves ill, so we must not surfeit or sicken our plants by one food, good as that food may be.

Experience has taught, with few exceptions, that the same crop is not to be grown year after year on the same soil. The crops are to be rotated. In the gardens and flower beds as in the field this should be true. If cabbage were on the east side last year, then put something besides cabbage or something in no way related to cabbage there this year. To think about gardening is to come to the conclusion that it is wise to rotate crops and equally wise to rotate or change fertilizer.

As nature makes an attempt to keep all soils busy and all bare spots covered up, so, whenever possible, man should plant cover crops and plow or spade them under. Rye and vetch planted in the fall and in the spring spaded in is an excellent method of green manuring.

Fertilizer is a big word. Shade from trees or buildings is another lack of fertility. The poisonous fumes from factories kill plants, so plants do breathe. After all, much or most of our fertilizer is just sunlight or air. While most of the world's fertility does not reach us as freight, some very good fertilizers that it is wise to use does come done up in bags.

Think of the organisms or bacteria that live in the soil as laborers living and working in their home and that they need material with which to work. These tiny workmen, we say, make the plant food available. So not only are workmen necessary, but we must supply them with the raw material with which to work. Some of the things we may add to the garden may contain with new workmen, call them micro-organisms if you wish, one or several raw materials as well. Other materials we supply to our gardens may contain only these elements or materials which we class as phosphates, potash and nitrogen. We say a fertilizer is complete when it contains these last three named elements. The word fertilizer suggests one or more of these three elements put up in bags and known as commercial fertilizer. If the manufacturers of commercial fertilizer have had a weakness it has been in their lack of effort to teach that their product is not an antidote for the poison of poor farming or gardening. No one who can see and think can doubt its profitable and necessary use. Such a use must go hand in hand with other good practices, like soil draining, subsoiling, liming, deep plowing, stable and green manuring, the rotation of crops, possibly the rotation of fertilizers, thorough cultivation and the use of good seed.

The Analysis and Price of Fertilizers Upon Request. The analysis tells the truth but not the whole truth. Just as there is a choice between good pieces of cloth so where good "guano" is concerned there is a preference. In buying fertilizer do not think of the tons of weight that are carried to the farm or garden, but rather be concerned more about the pounds of plant food and the conditions of that plant food.

Pulverized Sheep Manure. Humanity builds the results of its learning into little sayings, of them one is, "The sheep's foot is gold." Generations of farmers learned that where the sheep were kept or pastured later grew rich crops. So we are offering sheep manure that has been pulverized, screened and dried till it contains no weed seed and is in the most perfect condition for handling. Where the ant was found to follow the application of bone meal to lawns, the application of this Pulverized Sheep Manure was followed only by good results. Its effect is not only immediate but lasting. For a potting soil one part of this manure to six parts of the soil was found to be preferred. For the making of a liquid manure one pound to six gallons of water was superior. It has no objectionable odor, nor does it offend by its appearance. When heavily and freshly applied to lawns it is barely discernible. A heavy application is not to be feared but to be advised for house plants, lawns, flower gardens, fruit or vegetables. **Prices upon request.**

A PAGE ON FUNGICIDES AND INSECTICIDES

The attempt to summarize the militant ways of man in his battle with disease, fungi, and insects that attack our plant world would be, because of its brevity, somewhat imperfect. This quickly developed science that is rapidly progressing fills volumes of space. In the effort to be brief, which means we cannot be concise, we might say of the plants' enemies that they are: first, fungous diseases; second, insects that eat or chew the plant; third, insects that suck the plants' juices; fourth, insects that bore into the plant.

FIRST. The Fungous Diseases of plants may be thought of as blight, mildew, spot, speck, dry rot, black rot, rust, scab or mold, etc.

The remedies applied are called **Fungicides**. They may be preventative or cures, or both. Some of them are as follows:

Bordeaux Mixture.

Copper Sulphate.....	6 pounds
Quicklime	4 pounds
Water	40 gallons

Dissolve the copper sulphate by putting it in a bag of coarse cloth and hanging this in a vessel holding at least 4 gallons, so that it is just covered by the water. Use an earthen or wooden vessel. Slake the lime in an equal amount of water. Then mix the two and add enough water to make 40 gallons. It is then ready for immediate use.

Ammoniac Copper Carbonate.

Copper Carbonate.....	1 ounce
Ammonia	enough to dissolve the copper
Water	9 gallons

SECOND. Insects that chew or eat the plant may be bugs, caterpillars, worms or slugs. The poisons we feed to this class of our enemies we call **Stomach Poisons** and some of them are:

Paris Green.

Paris Green	1 pound
Water	250 gallons

If this mixture is to be used upon peach trees, 1 pound quicklime should be added. Repeated applications will injure most foliage unless lime is added. Paris Green and Bordeaux can be applied together with perfect safety. The action of neither is weakened, and the Paris Green loses all caustic properties. If applied as a powder it should be mixed with flour or plaster, 100 parts to 1 part Paris Green.

London Purple.

This is used in the same proportion as Paris Green,

THIRD. Insects that suck the juices of plants may be plant lice, mealy bug, green and black fly, red spider, scale, etc. The poisons we apply to this class of our enemies kill by striking through the insects skin and are referred to as **Contact Poisons**, some of them are:

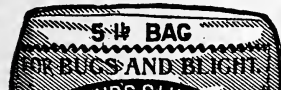
Kerosene Emulsion.

Hard Soap	½ pound
Boiling Water	1 gallon
Kerosene	2 gallons

Dissolve the soap in the water, add the kerosene, and churn well with soap for 5-10 minutes. Dilute 10 to 15 times before applying.

FOURTH. Insects that bore into the tree or plant are retarded or injured by having Tanglefoot put in their way or Fish-Oil Soap or Whale-Oil Soap smeared or washed upon the plant's trunk.

Frequently some combinations of the above Fungicides and Insecticides may be made with advantage, as Bordeaux with Arsenate of Lead, or Kerosene Emulsion with Paris Green. Again, in advertised articles upon the market are found some very superior combinations, two of which we list below.



Slugs Shot. This well known preparation has been in vogue for a century and its use is increasing. It can be used on all flowers, garden, on fruit trees, and on insect pests appear. It is non-poisonous to human.

The copper carbonate is best dissolved in large bottles, where it will keep indefinitely, and it should be diluted with water as required.

Copper Sulphate Solution.

Copper Sulphate.....	1 pound
Water	15 gallons

Dissolve the copper sulphate in the water, when it is ready for use. This should never be applied to foliage, but must be used before the buds break. For peaches and nectarines use 25 gallons of water.

Practically all insecticides and fungicides are now put up in concentrated form, saving the gardener the trouble of mixing the ingredients. Frequently this prepared article is superior to that which could be mixed at home and often cheaper. In this buying one has a choice as between the fluid, paste or dry forms at times.

but as it is more caustic it should be applied with lime, or with the Bordeaux mixture.

Hellebore.

Fresh White Hellebore.....	1 ounce
Water	3 gallons

Apply when thoroughly mixed.

Arsenate of Lead.

Among the insecticides none stand higher than this. It adheres and does not injure the most tender foliage, does not readily wash off and as it is white it shows where it has been applied. It remains so well suspended in solution as to give an even distribution.

Tobacco Dust or Tea.

The aphid or plant louse is not apt to go where there is tobacco dust and a tea made from tobacco, just tobacco boiled in water till the water is dark, is an excellent remedy for this class of pest.

For the protection of our highly recommended products at hand from large quantities of confident in offering it to our customers who are serious bug killers. It can be used on vegetable and fruit crops,



insects may be by dusting, using a powder gun, duster or pump or vaporizing bellows. A spray of bloom may kill the bees and affect pollination. In some cases, where poultry, stock and human beings are not

USEFUL INFORMATION

LEGAL WEIGHTS AND MEASURES—Pounds Per Bushel.

ARTICLES	Ills.	La.	Wis.	Mich.	Ind.	Mo.	N.Y.	Ohio
Apples, dried	24	24	28	22	25	24	22	22
Apples, green	50	..	57	..	..	..	..	..
Bran	20	20	20	..	20	20	20	20
Barley	48	48	48	48	48	48	48	48
Beans, white	60	60	60	60	60	60	62	60
Beans, Castor	46	46	46	46	46	46	46	46
Buckwheat	52	52	50	48	50	52	48	50
Broom Corn Seed	46	46	46	46	46	46	46	30
Beets	60	..	50	..	..	..	56	..
Carrots	55	..	50	..	..	50	..	50
Charcoal	22	22	22	22	22	22	22	..
Coal, stone	80	80	..	..	..	80	..	80
Coke	40	38	..	..	..	..	..	40
Corn, shelled	56	56	56	56	56	56	56	56
Corn, ear	70	70	70	70	68	70	70	68
Corn Meal	48	48	48	50	50	50	50	50
Cranberries	33	..	..	40	33	..	..	..
Dried Peaches	23	23	28	28	33	33	32	33
Flax Seed	56	56	56	56	56	56	56	56
Grass Seed, Blue	14	14	14	14	14	14	15	10
Grass Seed, Clover	60	60	60	60	60	60	60	60
Grass Seed, Hungarian	48	48	48	50	..	48	48	50
Grass Seed, Millet	50	48	50	50	50	50	..	50
Grass Seed, Orchard	14	14	..	14	14	14	14	14
Grass Seed, Red Top	14	14	14	14	14	14	14	14
Grass Seed, Timothy	45	45	45	45	45	45	44	45
German Lupine	60	..	..	..	..	..	..	..
Hemp Seed	44	44	44	44	44	44	44	44
Hickory Nuts	50	..	..	..	..	..	..	..
Malt, Barley	38	36	34	38	38	38	34	34
Mineral Coal	40	..	..	..	70	..	..	..
Middlings, fine	40	..	..	..	40	..	..	..
Middlings, coarse	30	..	..	..	30	..	..	..
Oats	32	32	32	32	32	32	32	32
Onions	57	57	57	54	48	57	57	50
Onions, tops	28	28	28	28	28	28	28	25
Onions, sets	33	..	..	..	..	..	..	..
Osage Orange	32	..	..	..	..	..	..	..
Parsnips	55	..	..	..	55	54	..	..
Potatoes	60	60	60	60	60	60	60	60
Potatoes, Sweet	50	46	55	56	55	56	55	50
Peas, dried	60	60	60	60	60	60	60	60
Peas, in pods	32	..	..	..	70	..	..	..
Pop Corn	70	..	..	..	..	..	..	..
Quick Lime	80	80	80	80	80	80	80	..
Rye	56	56	56	56	56	56	56	56
Salt, coarse	50	50	50	50	50	50	50	50
Salt, fine	55	50	56	56	50	50	56	50
Turnips, Rutabaga	55	55	56	58	55	50	55	60
Turnips, white	..	..	42	..	..	42	..	..
Wheat	60	60	60	60	60	60	60	60

Dry Measure. 2 pints, 1 quart; 8 quarts, 1 peck; 4 pecks, 1 bushel; 36 bushels, 1 chaldron.

Liquid Measure. 4 gills, 1 pint; 2 pints, 1 quart; 4 quarts, 1 gallon; 31½ gallons, 1 barrel; 2 barrels, 1 hoghead.

Measurements of an Acre. The following will be found useful in arriving at accuracy in estimating the amount of land in different pieces of ground under cultivation: 5 yards wide by 968 yards long, contains one acre; as do also the following measurements: 10 yards wide by 484 yards long; 20 yards wide by 242 yards long; 40 yards wide by 121 yards long; 70 yards wide by 69½ yards long; 60 feet wide by 726 feet long; 110 feet wide by 396 feet long; 120 feet wide by 363 feet long; 220 feet wide by 198 feet long; 240 feet wide by 181½ feet long, and 440 feet wide by 99 feet long.

Number of Plants or Trees to the Acre at Given Distances.

Dis. Apart.	No. Plants.	Dis. Apart.	No. Plants.
12x 1 in.	522,720	36x36 in.	4,480
12x 3 in.	174,240	42x12 in.	12,446
12x12 in.	43,560	42x24 in.	6,223
16x 1 in.	392,040	42x36 in.	4,148
18x 1 in.	348,480	48x12 in.	10,890
18x 3 in.	116,160	48x18 in.	7,790
18x12 in.	29,040	48x24 in.	5,445
18x18 in.	19,360	48x30 in.	4,356
20x 1 in.	313,635	48x36 in.	3,630
20x20 in.	15,681	48x48 in.	2,723
24x 1 in.	261,360	60x36 in.	2,901
24x18 in.	15,520	60x48 in.	2,178
24x24 in.	10,890	60x60 in.	1,743
30x 1 in.	209,088	8x 1 ft.	5,445
30x 6 in.	34,848	8x 3 ft.	1,815
30x12 in.	17,424	8x 8 ft.	680
30x16 in.	13,068	10x 1 ft.	4,356
30x20 in.	10,454	10x 6 ft.	726
30x24 in.	8,712	10x10 ft.	435
30x30 in.	6,970	12x 1 ft.	3,630
36x 3 in.	58,080	12x 5 ft.	736
36x12 in.	14,520	12x12 ft.	302
36x18 in.	9,680	16x 1 ft.	2,722
36x24 in.	7,260	16x16 ft.	170

REFERENCE TABLES

Quantity of Seed Requisite to Produce a Given Number of Plants and Sow an Acre.

	Quantity per Acre.
Artichoke, 1 oz. to 500 plants.	6 oz.
Asparagus, 1 oz. to 800 plants.	1 lb.
Asparagus Roots	1000 to 7250
Barley	2½ bu.
Barley, Dwarf, 1 pint to 100 ft. of drill.	1 bu.
Beans, pole, 1 pint to 100 hills.	½ bu.
Beet, garden, 1 oz. to 100 ft. of drill.	7 lbs.
Beet, mangel, 1 oz. to 100 ft. of drill.	5 lbs.
Broccoli, 1 oz. to 5,000 plants.	2 oz.
Brussels Sprouts, 1 oz. to 5,000 plants.	2 oz.
Buckwheat	½ bu.
Cabbage, 1 oz. to 3,000 plants.	2 oz.
Carrot, ¼ oz. to 100 ft. of drill.	2½ lbs.
Cauliflower, 1 oz. to 3,000 plants.	2½ oz.
Celery, 1 oz. to 15,000 plants.	2 oz.
Chicory	4 lbs.
Clover, Alsike and White Dutch	6 lbs.
Clover, Lucerne	15 to 25 lbs.
Clover, Crimson Trefoil	13 to 15 lbs.
Clover, Large Red and Medium	8 to 12 lbs.
Collards, 1 oz. to 5,000 plants.	2 oz.
Corn, rice (shelled)	2 qts.
Corn, sweet, ¼ pint to 100 hills.	6 qts.
Cress, ¼ oz. to 100 feet of drill.	12 lbs.
Cucumber, 1 oz. to 100 hills.	1 to 3 lbs.
Egg Plant, 1 oz. to 2,000 plants.	4 oz.
Endive, ¼ oz. to 100 ft. of drill.	4½ lbs.
Flax, broadcast	½ bu.
Garlic, bulbs, 1 lb. to 10 ft. of drill.	2 bu.
Grass, Blue, Kentucky	1 bu.
Grass, Blue, English	½ bu.
Grass, Hungarian and Millet	3 to 5 bu.
Grass, Mixed Lawn	8 to 10 lbs.
Grass, Red Top, Fancy, Clean	20 to 28 lbs.
Grass, Red Top, Chaff Seed	¼ bu.
Grass, Timothy	2 bu.
Grass, Orchard, Perennial Rye, Fowl Meadow and Wood Meadow	1½ bu.
Hemp	10,000 to 15,000
Horse Radish Roots	2 oz.
Kale, 1 oz. to 5,000 plants.	4 lbs.
Kohl Rabi, ½ oz. to 100 ft. of drill.	4 lbs.
Leek, ¼ oz. to 100 ft. of drill.	3 lbs.
Lettuce, ¼ oz. to 100 ft. of drill.	5 lbs.
Martynia, 1 oz. to 100 ft. of drill.	1 to 3 lbs.
Melon, Musk, 1 oz. to 100 hills.	1½ to 4 lbs.
Melon, Water, 4 oz. to 100 hills.	15 lbs.
Nasturtium, 2 oz. to 100 ft. of drill.	8 lbs.
Okra, 1 oz. to 100 ft. of drill.	4 to 5 lbs.
Onion Seed, ¼ oz. to 100 ft. of drill.	40 to 80 bu.
Onion Sets, 1 quart to 47 ft. of drill.	3 lbs.
Parsnip, ¼ oz. to 100 ft. of drill.	3 lbs.
Parsley, ¼ oz. to 100 ft. of drill.	1 to 3 bu.
Peas, garden, 1 pint to 100 ft. of drill.	2 oz.
Peas, field	3 oz.
Pepper, 1 oz. to 1,500 plants.	3 to 4 lbs.
Pumpkin, ¼ quart to 100 hills.	10 to 12 lbs.
Radish, ¾ oz. to 100 ft. of drill.	1½ bu.
Rye	8 lbs.
Salsify, ¾ oz. to 100 ft. of drill.	8 lbs.
Spinach, ½ oz. to 100 ft. of drill.	¾ lbs.
Summer Savory	8 lbs.
Sunflower	2 lbs.
Squash, Summer, 4 oz. to 100 hills.	2 lbs.
Squash, Winter, 8 oz. to 100 hills.	2 oz.
Tomato, 1 oz. to 4,500 plants.	2 oz.
Tobacco, 1 oz. to 5,000 plants.	1 to 3 lbs.
Turnip, 1 oz. to 250 ft. of drill.	2 bu.
Vetches	2

THE ALL-GROW SEED HOUSE

PARSLEY.

	Pkt.	Oz.	¼-Lb.	Lb.
Champion Moss Curled .....	.05	.10	.25	1.25

PARSNIPS.

Improved Hollow Crown .....	.05	.10	.20	.60
Guernsey Improved .....	.05	.10	.20	.60

PEAS—Smooth Seed.

Smooth Seed Peas, 60 lbs. to bushel.

Alaska .....	.10	.15	.20	.35
Fillbasket .....	.10	.20	.25	.40

PEAS—Wrinkled Seed.

Wrinkled Seed, 56 lbs. to bushel.

American Wonder .....	.10	.15	.20	.35
Advancer .....	.10	.15	.20	.35
Danby Stratagem .....	.10	.15	.20	.35
Nott's Excelsior .....	.10	.15	.20	.35
Gems, Premium .....	.10	.15	.20	.35
Gems, McLean's Little .....	.10	.15	.20	.35

Choice Flower Seeds

	Packet
Alyssium	\$0.05
Asters, Finest Mixed .....	.05
Asters, Semple's Branching, Mixed .....	.10
Asters, Mixed Victoria .....	.10
Asters, Perfection Mixed .....	.10
Bachelor Button, Double Mixed .....	.05
Balsam, Double Tall Mixed .....	.05
California Poppy .....	.05
Calliopsis, Fine Mixed .....	.05
Candytuft, Fine Mixed .....	.05
Canterbell, Double Mixed .....	.05
Centaurea .....	.05
Centaurea, Impereas Mixed .....	.10
Carnations, Fine Mixed .....	.05
Carnations, Choice Mixed .....	.10
Cosmos, Grant Mixed .....	.05
Cypress Vine, Mixed .....	.05
Daisy .....	.05
Gourds, Fancy Mixed .....	.05
Ice Plant .....	.05
Joseph's Coat .....	.05
Maurandia, Fine Mixed .....	.10
Marigold .....	.05
Marigold, Meteor .....	.05
Morning Glory, Mixed .....	.05
Morning Glory, Japanese Mixed .....	.05
Mignonette, Sweet .....	.05
Nasturtium, Dwarf Mixed .....	.05
Nasturtium, Tall Mixed .....	.05
Pansy, Choice Mixed .....	.05
Petunia, Fine Mixed .....	.05
Phlox, Choice Mixed .....	.05
Pinks, Double Diadem Mixed .....	.05
Pinks, Double China Mixed .....	.05
Poppy, Shirley Mixed .....	.05
Poppy, Double Carnation Mixed .....	.05

THE ALL-GROW SEED HOUSE

Portulaca, Double Mixed .....	.10
Portulaca, Single Mixed .....	.05
Primrose, Showy Evening Mixed .....	.05
Sensitive Plant, Mixed .....	.05
Snap Dragon, Fine Mixed .....	.05
Sunflower, Double Mixed .....	.05
Stock, Mixed .....	.05
Sweet Peas, Leonard's Choice Mixed, very best; per ounce, 10c; per packet.....	.05
Sweet William .....	.05
Wall Flower, Double Mixed .....	.05
Verbena, Fine Mixed .....	.05
Zinnia, Double Choice Mixed .....	.05

Vegetable Plants

	Doz.	100	1000
Cabbage, Early Jersey, Early Express and Copenhagen.....	\$0.10	\$0.60	\$5.00
Cabbage, Transplanted Plants .....	.15	.75	6.50
Cauliflower, Best Varieties .....	.15	.75	6.50
Celery, Leading Kind, Transplanted .....	.15	.75	6.50
Egg Plant .....	.15	.75	
Pepper, Leading Kinds, Sweet Transplanted.....	.15	.75	
Pepper, Hot, Transplanted .....	.15	.75	
Sweet Potatoes .....	.10	.40	3.50
Tomatoes, Best Earliest, Transplanted .....	.15	.60	6.00
Tomatoes, Best Earliest, large, in 4-inch pots.....	.40	3.50	

Flower Plants for Bedding

	Doz.	100
Agretum, Blue and White, from 2-inch pots.....	\$0.50	\$4.00
Alteranthena, from 2-inch pots.....	.50	4.00
Alyssum, from 2-inch pots .....	.50	4.00
Arteenesie (Dusty Miller), from 2-inch pots .....	.75	5.00
Asters, 12 varieties, strong plants.....	.25	1.50
Canna, Started, 4 to 6 inches, eight varieties	1.20	8.00
Coleos, ten varieties for bedding, 2-inch pots.....	.60	5.00
Geraniums, 3-inch pots	1.00	8.00
Pansies, Best Mixed .....	.30	3.00
Salvia, 2-inch pots .....	.70	6.00
Salvia, 4-inch pots	1.50	10.00

Many other plants too numerous to list here. Ask for list.

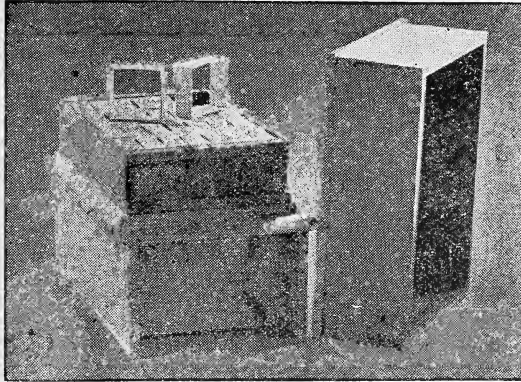
Bulbs

	Each.	Doz.
Black Beauty, Foliage Bronze, Flower Red, 4 to 5 ft.	\$0.10	\$1.00
Burbank, Foliage Green, Flower Canary Yellow, 4 to 5 ft.....	.10	1.00
Florence Vaughn, Foliage Yellow and Red, 5 ft.....	.10	1.00
Egandale, Foliage Bronze, Flower Cherry Red, 5 to 6 ft.....	.10	1.00
Kentucky Wonder, Foliage Green, Flower Pink, 2 to 3 ft.....	.10	1.00
Allemania, Foliage Green, Flower Large Red, 5 to 6 ft.....	.10	1.00
King Humbert, Foliage Bronze, Flower Red, 5 to 6 ft.....	.10	1.00

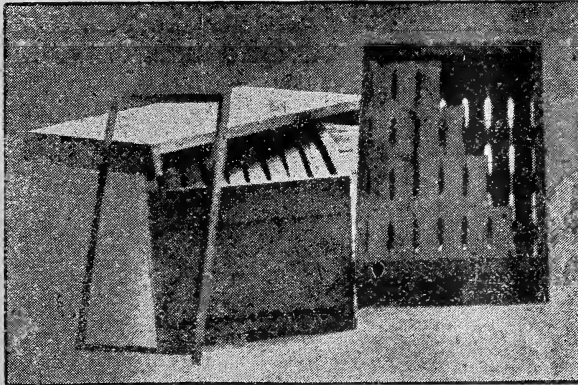
Notice—We pay transportation on all plants and bulbs listed in Dozen Column and not listed in pots. Parties must pay all transporting charges on all plants listed in pots and on hundred and thousand lots. 50 plants at 100 rate, and 500 plants at 1000 rates.

Langstroth Hives

This is the regular Langstroth Hive. We furnish all our hives with the standard size brood frames, and they are loose hanging frames, with V-comb guide, and bees will build straight combs. But if special request is made we will furnish a frame grooved for foundation. We furnish hives either completed, or in flat, with all the material ready to nail up, including brood frames and sections. But no foundation is put in unless requested, and an additional charge of 40 cents must be added to the price.



	Nailed and Painted 1	Nailed up 1	In flat 5	In flat 10
8-frame L. hive for comb honey	\$2.50	\$2.20	\$9.75	\$19.00
10-frame L. hive for comb honey.....	2.60	2.30	10.50	20.50
Supers for 8-frame L. hive with sections.....	.80	.75	3.50	6.50
Supers for 10-frame L. hive with sections.....	.85	.80	4.00	7.00
Supers for 8-frame L. hive without sections.....	.50	.90	2.00	3.75
Supers for 10-frame L. hive without sections.....	.55	.50	2.50	4.75



Heddon Hive

This hive is nearly like the dove-tailed hive, only it is not dovetailed, and we send with it supers with pattern slats in the super; takes the same size frame as the dovetailed hive, has a flat cover with a cleat nailed on the end. Is one of the best hives in use. All beekeepers in this vicinity use it and it is the hive for common folks. It is a one and a half story hive, and we include all brood frames, sections, one super and the material to put up a complete hive.

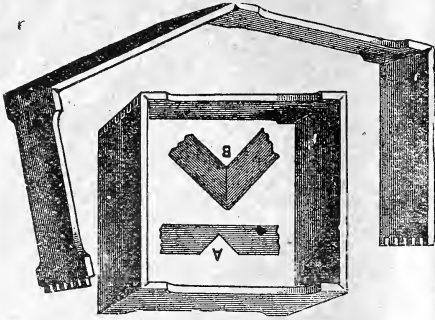
	Nailed and Painted 1	Nailed up 1	In flat 5	In flat 10
8-frame Heddon hive, with frames, super, sections, complete	2.40	2.15	10.00	19.50
10-frame Heddon hive, with frames, super, sections, complete	2.40	2.15	10.00	19.50

If hives for extracting are wanted they are same price as for comb honey.

Super for 8 and 10-Frame Heddon Hives.

	Nailed up and Painted 1	5	10
Super for 8-frame hive, with sections and foundation.....	\$.90	\$4.50	\$8.50
Super for 10-frame hive, with sections and foundation.....	1.00	4.75	9.50
Super, without foundation and sections.....	.50	2.40	4.50

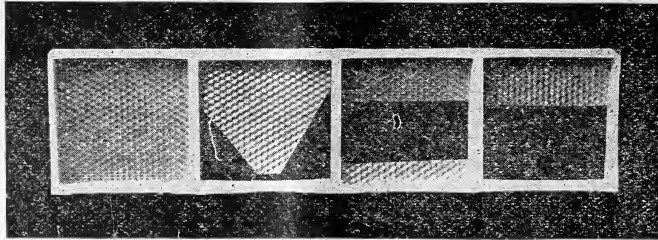
THE ALL-GROW SEED HOUSE



We keep in stock the following sizes of sections: $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$; the $4\frac{1}{4} \times 4\frac{1}{4}$ 7-to-foot or sometimes called $1\frac{3}{4}$. We also keep in stock the No-Bee-Way sections, $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ inches, at 25 cents per 1000 less.

Prices of No. 1 Sections.

Less than 100.....	each 1c
Less than 500 .....	.85c per 100
500 (one crate)	\$ 3.00
1000 (two crates)	6.00
2000 (four crates)	11.75
3000 (six crates)	17.25



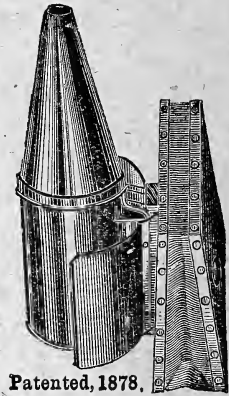
Foundation for sections.....1 lb., 65c; 5 lbs. at 63c; 10 lbs. or more at 60c
Foundation for brood1 lb., 60c; 5 lbs. at 58c; 10 lbs. or more at 55c

Bee Smokers

This smoker has long been recognized as one of the best smokers in the market. It is well made, has many excellent qualities, and is perhaps as near a perfect article as can be had for the money. Prices are as follows:

Name	Size of Barrel	Postage	Price of 1	Price of 3
Smoke Engine	4 in.	\$0.25	\$1.25	\$3.45
Doctor	$3\frac{1}{2}$ in.	.25	.85	2.40
Conqueror	3 in.	.25	.75	1.95
Large	$2\frac{1}{2}$ in.	.20	.65	1.65
Little Wonder	2 in.	.10	.50	1.35

When you order smokers to be sent by mail, be sure to add the postage to the price.



Patented, 1878.

Bees and Queen Bees

For a number of years we have taken first premium at the Iowa State Fair. We have the best strain of bees that can be procured, and our queens are all reared from natural queen cells.

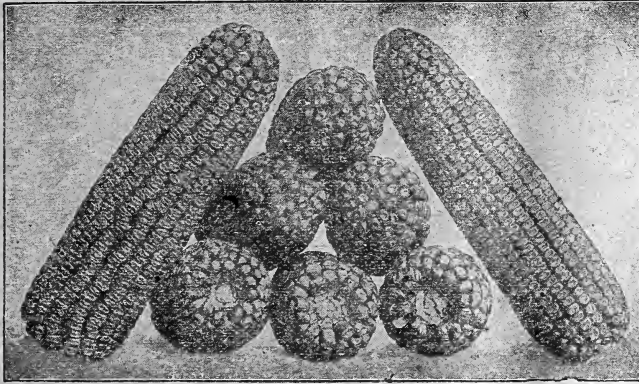
Untested queens, after June 1, each.....	\$1.00
Tested queens, after June 1, each.....	1.50
Select tested queens, after June 1, each.....	2.00
Full colonies of bees, in May, with selected queen.....	6.00

We keep in stock all kinds of Bee Supplies that we cannot list here. Drop us a postal of your wants and we will make you prices by return mail.



Brood Frames, Standard Size

	10	100
Hoffman self spacing	\$.30	\$3.50
Loose hanging frame, V-top .....	.25	3.00
Loose hanging frame, heavy top bar grooved for foundation.....	.30	3.25



Seed Corn

Good and highly bred Seed Corn is always in demand. During the seasons of 1914 and 1915 more attention was paid to corn that grew than to highly bred corn, and the demand for a good pure type of corn is now

looked for. We have a good lot of extra fine Seed Corn of the improved Reid variety, raised by an expert corn raiser. This corn is of a high type.

Choice Seed Potatoes

It is well known that Minnesota Potatoes produced in the Red River Valley are much superior for seed than native production. Prices on application.

Shrubbery

In connection with our Seed Store, we will keep in stock Shrubbery and Nursery stock, Raspberry, Blackberry, Strawberry Plants, Pieplant, Gooseberry and Currant Plants. At this writing we are not able to give prices.

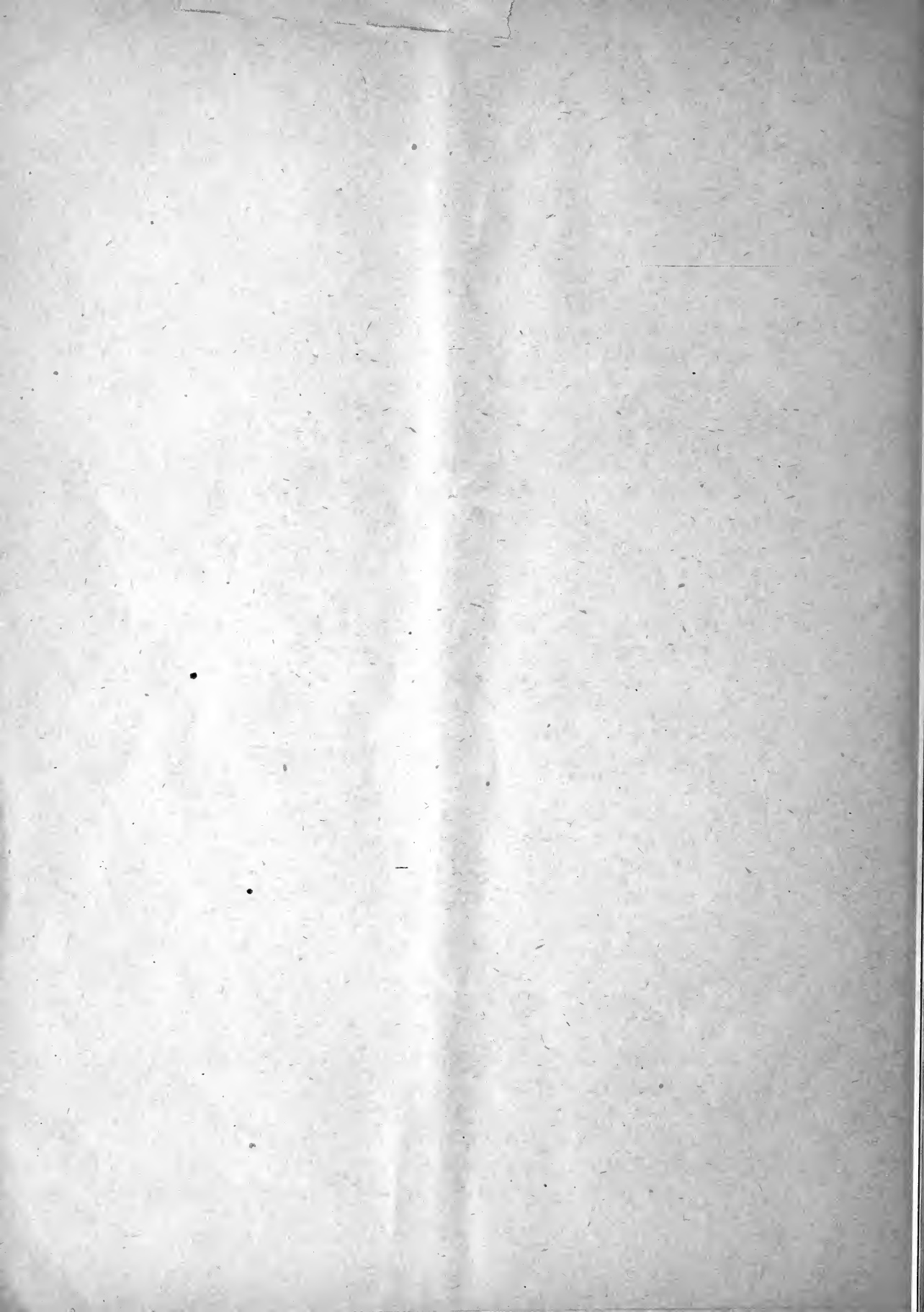
Poultry

We have a nice strain of White Orpington Fowls and will offer some eggs for sale the coming season. \$1.50 per sitting, 13 eggs.

THE ALL-GROW SEED HOUSE

J. W. Bittenbender, Prop.

KNOXVILLE, IOWA



We Respectfully Submit the Following Suggestions for Your Consideration

1. That a larger vegetable diet instead of much meat possibly might be of benefit to your health and that of your family.
2. That a diet of vegetables is more economical than a meat diet.
3. That the kitchen garden is the surest way of securing fresh vegetables, as the purchased vegetable is most frequently old and inferior.
4. That if you do not plant your yard and care for it, the weeds will grow and become ugly and offensive.
5. That you plant your vegetables in long rows instead of little beds and do without stooping, the work of six hoes with our wheeled garden cultivator.
6. That the work of making a garden is as healthful a physical exercise as golf and as mentally stimulating as chess, the work for ladies and gentlemen.
7. That no house can be complete in its setting without well-kept gardens, lawns and flowers.
8. That no place can possibly be mean that has about it gardens, lawns and flowers grown from our vegetable, grass and flower seed.
9. That we buy seed in bulk that is fresh and tested; not old and returned commission seed.
10. That the superior seed we handle is here within your reach when you want it without the trouble, expense and delay of sending for it.
11. That this seed is as reasonable in price and as good seed as can be secured.
12. That in buying your seed or other supplies of us, you are keeping the dollars and pennies at home.
13. That we certainly do appreciate your trade fully.
14. That you buy at once before some varieties of seed, made scarce by the war and bad climatic conditions, be exhausted.
15. That if you will submit us a list of your future seed wants upon which we may figure, we will save you much more than the express or postage plus the cost of sending and be here to see the result of the seed we sell you.



Dealers in All Kinds of
Field and Garden Seeds
Potatoes, Bee Supplies and Honey